



Environment

Submitted to:
Encana Oil & Gas (USA) Inc.
Denver, Colorado

Submitted by:
AECOM
Fort Collins, Colorado
60221849.1400
February 2012

Pavillion Natural Gas Field, Fremont County, Wyoming, Encana Oil & Gas (USA) Inc.

2011 Pit Investigation Report – Blankenship Fee 4-8



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Prepared by
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Reviewed by
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List of Acronyms

AECOM	AECOM Technical Services, Inc.
BF 4-8	Blankenship Fee 4-8
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
DRO	diesel range organics
Encana	Encana Oil & Gas (USA) Inc.
ESC	Environmental Science Corporation
GRO	gasoline range organics
IME	Inberg Miller Engineers
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
OCSRRS	Oil Contaminated Soil Remediation Ranking System
PID	photoionization detector
PVC	polyvinyl chloride
SHWD	Solid and Hazardous Waste Division
SVOC	semi-volatile organic compounds
TPH	total petroleum hydrocarbons
USEPA	U.S. Environmental Protection Agency
VRP	Voluntary Remediation Program
WDEQ	Wyoming Department of Environmental Quality
WOGCC	Wyoming Oil and Gas Conservation Commission

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Figure 2-1 Blankenship Fee 4-8 Site Map

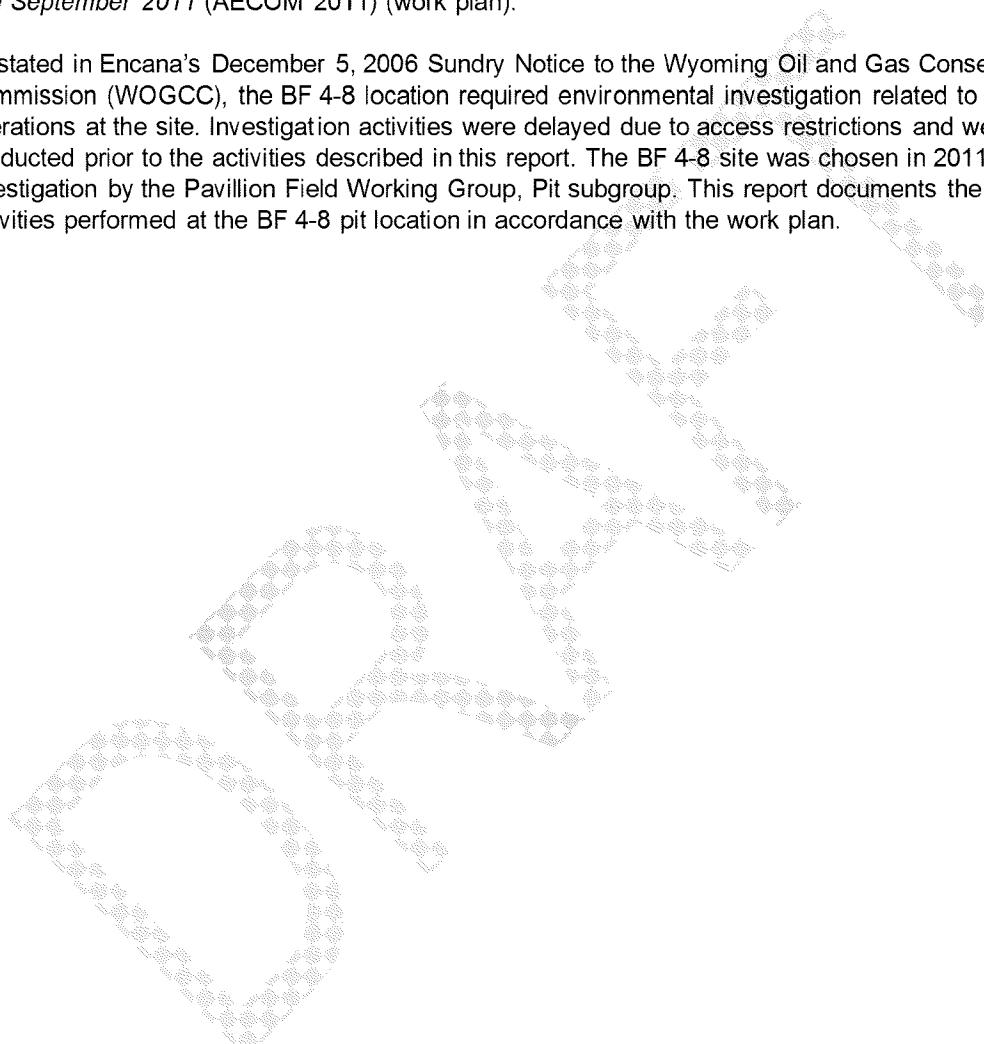
Figure 3-1 Blankenship Fee 4-8 Soil Analytical Results

Figure 3-2 Blankenship Fee 4-8 Groundwater Analytical Results

1.0 Introduction

This investigation report has been prepared by AECOM Technical Services, Inc. (AECOM) on behalf of Encana Oil & Gas (USA) Inc. (Encana). The purpose of this report is to summarize the results of the site investigation activities performed at the Blankenship Fee 4-8 (BF 4-8) pit location within the Pavillion Natural Gas Field east of the town of Pavillion, Fremont County, Wyoming (see **Figure 1-1** for a site location map). The work activities completed at the pit site were detailed in the August 18, 2011 *Draft Pavillion Natural Gas Field, Fremont County, Wyoming, Field Work Plan for Site Investigations – August and September 2011* (AECOM 2011) (work plan).

As stated in Encana's December 5, 2006 Sundry Notice to the Wyoming Oil and Gas Conservation Commission (WOGCC), the BF 4-8 location required environmental investigation related to historic pit operations at the site. Investigation activities were delayed due to access restrictions and were not conducted prior to the activities described in this report. The BF 4-8 site was chosen in 2011 for pit investigation by the Pavillion Field Working Group, Pit subgroup. This report documents the investigation activities performed at the BF 4-8 pit location in accordance with the work plan.



2.0 Summary of Field Activities

The primary field activities conducted at BF 4-8 included: utility clearance; soil boring advancement and soil sampling; temporary monitoring well installation, development, and sampling; and final field surveying of all boreholes and temporary monitoring wells.

2.1 Ground Disturbance Activities

In accordance with Encana's Ground Disturbance Practice, all utilities within a 100 foot radius search area were marked. All utilities within 15 feet of a proposed ground disturbance location were positively identified using air and water excavation.

2.2 Soil Assessment

Six soil borings were advanced at the site using either direct-push drilling technology or hand-auguring following utility clearance. All soil borings SB-1-11 (BF 4-8) through SB-6-11 (BF 4-8) were advanced in the northeast portion of the well pad in proximity of the former pit location as shown in **Figure 2-1**.

Drilling activities were performed by Inberg Miller Engineers (IME) of Riverton, Wyoming, on September 8, 2011. Each soil boring was logged by a field engineer. Photoionization detector (PID) headspace readings were collected and recorded at every 2-foot interval. No additional soil borings were necessary based on lack of visual observations of impact and PID readings less than 100 parts per million (ppm) in soil intervals above the groundwater table. The soil boring logs are provided in **Appendix A**.

Soil borings SB-2-11 (BF 4-8) and SB-5-11 (BF 4-8) were completed using hand-auger procedures to depths of 2.5 feet and 1 foot, respectively. The remaining borings were advanced using direct-push technology and ranged from depths of 8 to 16 feet below ground surface (bgs). Groundwater was encountered at a depth of 2.5 feet bgs in all soil borings except SB-5-11 (BF 4-8) which recorded a water table depth of 0.5 feet bgs. Since the water level was shallower than the suspected depth of the former pit, certain borings were advanced beyond the groundwater table. These borings were chosen by the site engineer to evaluate the soil and groundwater conditions at the total pit depth and beyond. The specific locations were selected based on drill rig accessibility of the location due to saturated conditions on the surface. The maximum PID readings from each boring were 112.9 ppm at approximately 6 to 8 feet bgs (SB-1-11 [BF 4-8]); 4,000 ppm at approximately 8 to 12 feet bgs (SB-3-11 [BF 4-8]); and 583 ppm at approximately 8 to 12 feet bgs (SB-6-11 [BF 4-8]). PID readings ranged from 0.0 to 0.2 at soil borings SB-2-11 (BF 4-8), SB-4-11 (BF 4-8), and SB-5-11 (BF 4-8).

One soil sample was collected from each boring from the interval immediately above the water table. Samples were submitted for laboratory analysis of total petroleum hydrocarbon (TPH) as gasoline range organics (GRO) and diesel range organics (DRO), as required by WOGCC. Additional samples were collected from boring intervals with a PID reading greater than 100 ppm and laboratory analyzed for semi-volatile organic compounds (SVOC). Soil samples were sampled for SVOC and not sampled for benzene, toluene, ethylbenzene, and total xylenes (BTEX) in a deviation from the work plan. The sampling and analysis conducted on each boring is provided below:

- SB-1-11 (BF 4-8) – One sample was collected for TPH analysis and one sample was collected for SVOC analysis;
- SB-2-11 (BF 4-8) – One sample was collected for TPH analysis;
- SB-3-11 (BF 4-8) – One sample was collected for TPH analysis and one sample was collected for SVOC analysis; and
- SB-4-11 (BF 4-8) – One sample was collected for TPH analysis.

- SB-5-11 (BF 4-8) – One sample was collected for TPH analysis.
- SB-6-11 (BF 4-8) – One sample was collected for TPH analysis and one sample was collected for SVOC analysis.

All soil samples were submitted to Environmental Science Corporation (ESC) of Mt. Juliet, Tennessee, for laboratory analysis. Analysis of TPH-GRO and DRO was completed using U.S. Environmental Protection Agency (USEPA) Method 8015. Analysis of SVOC was completed using USEPA Method 8270C. A discussion of analytical results is provided in Section 3.1.

All soil borings were surveyed and are shown on **Figure 2-1**. Soil borings SB-2-11 (BF 4-8), SB-4-11 (BF 4-8), SB-5-11 (BF 4-8), and SB-6-11 (BF 4-8) were plugged and abandoned using hydrated bentonite chips.

2.3 Groundwater Assessment

Two temporary monitoring wells were advanced at boring locations SB-1-11 (BF 4-8) and SB-3-11 (BF 4-8). The temporary monitoring well locations are shown on **Figure 2-1**. The temporary monitoring wells were constructed using 1-inch Schedule 40 polyvinyl chloride (PVC). Temporary monitoring well SB-1-11 (BF 4-8) was advanced approximately 9.5 feet below the water table to a depth of 12 feet. Temporary monitoring well SB-3-11 (BF 4-8) was advanced approximately 8.5 feet below the water table to a depth of 11 feet. The temporary monitoring well was installed at SB-3-11 (BF 4-8) since this soil boring exhibited the greatest potential for groundwater impacts based on visual observations and PID readings in excess of 100 ppm at the approximate depth of the former pit. The temporary monitoring well was installed at SB-1-11 (BF 4-8) to provide a representation of groundwater conditions on the opposite side of the presumed pit location. There also was a potential for groundwater impacts at the SB-1-11 (BF 4-8) location based on visual observations and PID readings in excess of 100 ppm. Both temporary monitoring wells were developed using a peristaltic pump and approximately 3 gallons of water was removed from each well during development.

One groundwater sample was collected from each temporary monitoring well using low-flow sampling techniques. Prior to sample collection, the wells were purged using a peristaltic pump until field parameter stability was maintained. Greater than one purge volume of groundwater was removed from each well. Field parameters recorded during well purging included dissolved oxygen, pH, temperature, specific conductance, and oxidation reduction potential. A copy of the groundwater sampling field forms are provided in **Appendix B**. Groundwater samples were packed on ice and submitted to ESC for analysis of TPH-GRO and DRO using USEPA Method 8015, BTEX using USEPA Method 8260B, and SVOC using USEPA Method 8270C. One blind duplicate and one trip blank also were submitted for quality assurance/quality control purposes. A discussion of groundwater sampling results is provided in Section 3.2.

The temporary monitoring wells were surveyed and are shown on **Figure 2-1**. The temporary monitoring wells were left in place pending the BF 4-8 site evaluation.

3.0 Analytical Sample Summary

3.1 Soil Sample Results

Six soil samples were submitted for analysis of TPH-GRO and DRO. Three samples were submitted for analysis of SVOC. The soil sampling TPH results are compared to a cleanup level of 1,000 milligrams per kilogram (mg/kg). This cleanup level is the site specific cleanup level calculated by Encana using the WOGCC "Guideline for Closure of Unlined Production Pits" Oil Contaminated Soil Remediation Ranking System (OCSRRS). Concentrations of SVOC from the soil samples above the groundwater table are compared to the residential soil cleanup level and the migration to groundwater cleanup level, both based on the Wyoming Department of Environmental Quality/Solid and Hazardous Waste Division (WDEQ/SHWD) cleanup level spreadsheet effective June 30, 2009. Analytical soil sample results are summarized in **Table 3-1** and are shown on **Figure 3-1**. A copy of the laboratory report is provided in **Appendix C**.

TPH-GRO was not detected in any of the soil samples analyzed. TPH-DRO was detected in one of the soil samples at a concentration that was below regulatory cleanup levels.

Certain SVOCs were detected in each of the three soil samples analyzed. These soil samples were collected at intervals below the groundwater table and SVOC detections in groundwater are discussed in the groundwater evaluation. A WOGCC cleanup guideline and WDEQ soil cleanup standard for detections in soil below the groundwater table does not exist. As such, these compounds were evaluated in the dissolved phase and compared to WDEQ groundwater cleanup standards as described in Section 3.2.

3.2 Groundwater Sample Results

One groundwater sample was collected from each temporary monitoring well [SB-1-11 (BF 4-8) and SB-3-11 (BF 4-8)]. The samples were analyzed for TPH-GRO and DRO, BTEX, and SVOC.

Groundwater sample results were compared to the WDEQ/SHWD current cleanup levels. Analytical groundwater sample results are summarized in **Table 3-2** and are shown on **Figure 3-2**. A copy of the laboratory report is provided in **Appendix C**.

TPH-GRO and DRO were detected in the groundwater sample SB-1-11 (BF 4-8). The detections in SB-1-11 (BF 4-8) were below the TPH-GRO cleanup level of 7.3 milligrams per liter (mg/l) and TPH-DRO cleanup level of 1.1 mg/l. BTEX and SVOC were not detected in the SB-1-11 (BF 4-8) groundwater sample.

TPH-GRO, toluene, ethylbenzene, total xylenes, and naphthalene were detected in the groundwater sample SB-3-11 (BF 4-8). The detections in SB-3-11 (BF 4-8) were below the cleanup levels of 7.3 mg/l (TPH-GRO), 1 mg/l (toluene), 0.7 mg/l (ethylbenzene), 10 mg/l (total xylenes), and 0.729 mg/l (naphthalene). TPH-DRO and benzene in the SB-3-11 (BF-4-8) groundwater sample were detected above the applicable cleanup levels of 1.1 mg/l and 0.005 mg/l, respectively.

4.0 Discussion

Analytical results at the site indicate that soil impact concentrations are below the applicable cleanup guidelines. In groundwater, benzene and TPH-DRO were detected above cleanup levels at the site. Based on the benzene and TPH-DRO detected concentrations, Encana requested reinstatement of the BF 4-8 pit site to the WDEQ Voluntary Remediation Program (VRP) in a letter dated October 19, 2011 (Encana 2011). Reinstatement was requested in lieu of a new application since an application for this site into the VRP was previously submitted and subsequently withdrawn.

A work plan detailing the site characterization and interim remedial actions, if applicable, will be developed under separate cover. Future activities are anticipated to commence under jurisdiction of the WDEQ VRP.



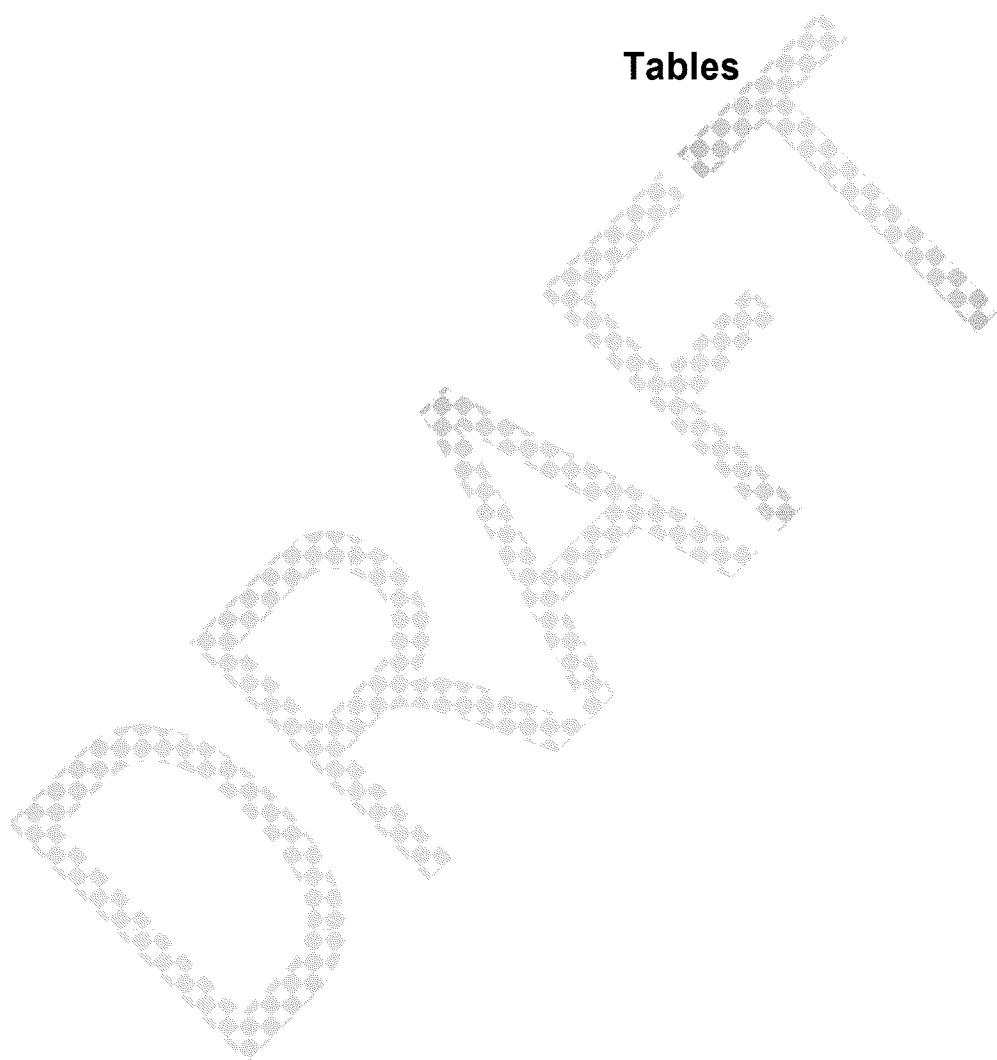
5.0 References

AECOM. 2011. Pavillion Natural Gas Field, Fremont County, Wyoming, Encana Oil and Gas (USA) Inc., Field Work Plan for Site Investigations – August and September 2011. August 2011.

Encana Oil & Gas (USA), Inc. 2011. Letter to WDEQ. Request for Blankenship Fee 4-8 Reinstatement to Voluntary Remediation Program, Pavillion Natural Gas Field, Fremont County, Wyoming, Encana oil & Gas (USA), Inc. Pavillion Natural Gas Field, Fremont County, Wyoming, Encana Oil and Gas (USA) Inc. October 19, 2011.



Tables



Draft - Table 3-1 - Soil Sample Analytical Results, September 8, 2011
 Blankenship Fee 4-8, Pavillion Natural Gas Field, Wyoming

Sample Name					SB-1-11	SB-1-11 ¹	SB-2-11	SB-3-11	SB-3-11 ¹	SB-4-11	SB-5-11	SB-6-11	SB-6-11 ¹
Sample Depth (feet)					2-4	6-8	2-3	2-4	8-10	2-4	0-1	2-4	8-12
Sample Date					9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011
Results													
TPH (GC/FID) Low Fraction	mg/kg	GRO	1,000 (Combined) ²	< 0.50	--	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50	< 0.50	--
TPH (GC/FID) High Fraction (DRO Wyoming C10-C32)	mg/kg	8015		< 4.0	--	< 4.0	< 4.0	--	< 4.0	< 4.0	32	< 4.0	--
Acenaphthene	mg/kg	8270C	3,400	27	--	< 0.033	--	--	0.14	--	--	--	< 0.033
Acenaphthylene	mg/kg	8270C	NA	NA	--	< 0.033	--	--	0.084	--	--	--	< 0.033
Fluorene	mg/kg	8270C	2,300	33	--	0.11	--	--	0.17	--	--	--	< 0.033
Naphthalene	mg/kg	8270C	3.9	0.00055	--	2.3	--	--	5.3	--	--	--	0.060
Phenanthrene	mg/kg	8270C	NA	NA	--	< 0.033	--	--	0.066	--	--	--	< 0.033
Other Semi-Volatile Organic Compounds (SVOC)	mg/kg	8270C	Note ³	Note ³	--	Not Detected ¹	--	--	Not Detected ¹	--	--	--	Not Detected ¹

Notes:

-- = not analyze; < = sample result is less than the laboratory detection limit; DRO = diesel range organics; FID = flame ionization detector; GC = gas chromatograph; GRO = gasoline range organics; mg/kg = milligrams per kilogram; NA = not available;

= exceeds Migration to Groundwater Cleanup Levels

= exceeds Migration to Groundwater Cleanup Levels and Residential Soil Cleanup Levels

Bold = detection

¹ Samples SB-1-11 6-8, SB-3-11 8-10, SB-6-11 8-10 were analyzed for SVOCs using method 8270C. Detected SVOCs are identified in the table and all other SVOCs were below detection limits (see corresponding laboratory report).

² The TPH cleanup level of 1,000 mg/kg is based on the most stringent cleanup level identified in the Wyoming Oil and Gas Conservation Commission "Guideline for Closure of Unlined Production Pits". If TPH is detected at a level greater than 1,000 mg/kg then the appropriate cleanup level will be determined based on the Oil Contaminated Soil Remediation Ranking System (OCSRRS).

³ Soil cleanup levels are based on the Wyoming Department of Environmental Quality/Solid and Hazardous Waste Division (DEQ/SHWD) cleanup level spreadsheet effective June 30, 2009.

Draft - Table 3-2 - Groundwater Analytical Results, September 8, 2011
 Blankenship Fee 4-8, Pavillion Natural Gas Field, Wyoming

Sample Name				SB-1-11 ¹	SB-3-11 ¹
Sample Date				9/8/2011	9/8/2011
Analyte	Units	Method	Water Cleanup Levels (mg/l) ²	Results	
TPH (GC/FID) Low Fraction	mg/L	GRO	7.3	0.24	5.2
TPH (GC/FID) High Fraction (DRO Wyoming C10-C32)	mg/L	8015	1.1 ³ /10 ⁴	0.69	13
Benzene	mg/L	8260B	0.005	< 0.0010	0.11
Toluene	mg/L	8260B	1	< 0.0050	0.25
Ethylbenzene	mg/L	8260B	0.7	< 0.0010	0.24
Xylenes, Total	mg/L	8260B	10	< 0.0030	1.2
Acenaphthene	mg/L	8270C	2.19	< 0.0010	< 0.0010
Acenaphthylene	mg/L	8270C	NA	< 0.0010	< 0.0010
Fluorene	mg/L	8270C	1.46	< 0.0010	< 0.0010
Naphthalene	mg/L	8270C	0.729	< 0.0010	0.072
Phenanthrene	mg/L	8270C	NA	< 0.0010	< 0.0010
Other Semi-Volatile Organic Compounds (SVOC)	mg/L	8270C	Note ²	Not Detected ¹	Not Detected ¹

Notes:

< = sample result is less than the laboratory detection limit; DRO = diesel range organics; FID = flame ionization detector; GC = gas chromatograph; GRO = gasoline range organics; mg/L = milligrams per liter; NA = not available; TPH = total petroleum hydrocarbons

= exceeds Migration to Groundwater Cleanup Levels and Residential Soil Cleanup Levels

Bold = detection

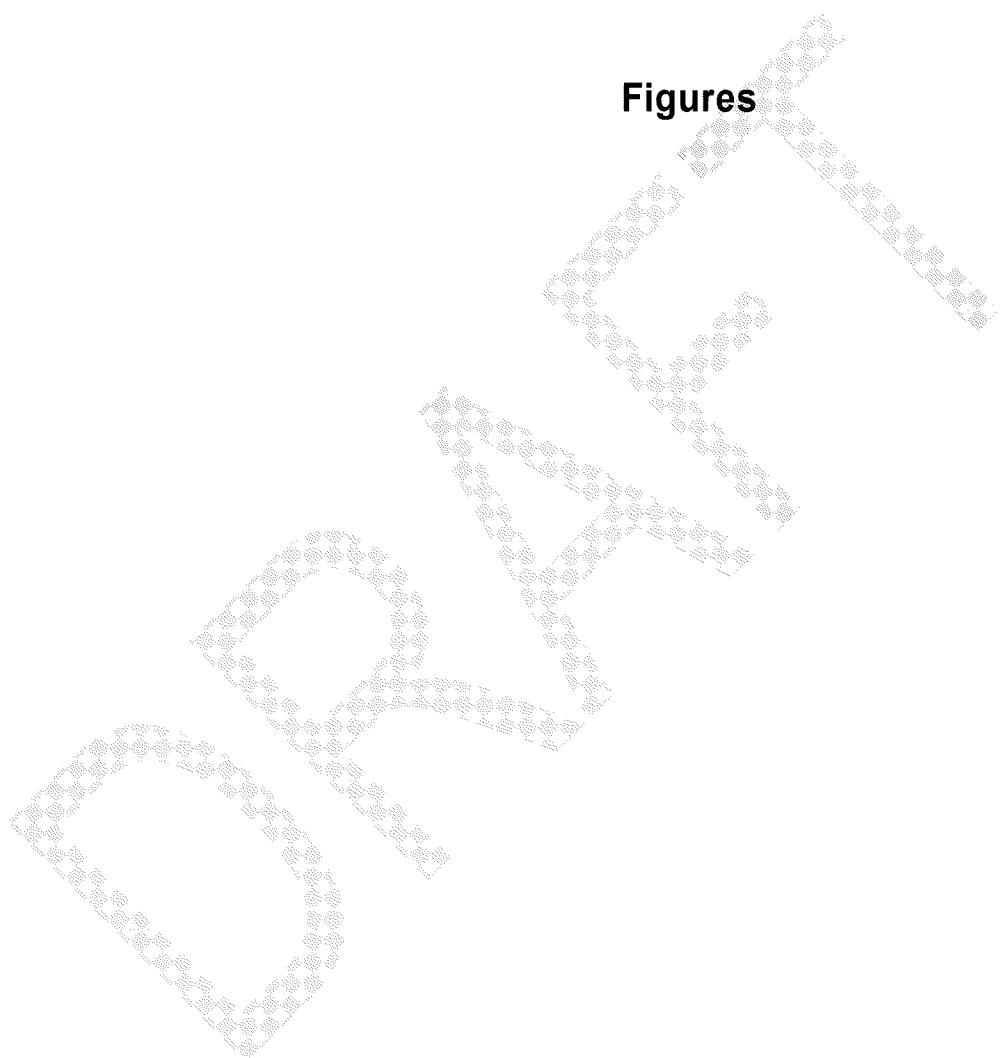
¹ Samples SB-1-11 and SB-3-11 were analyzed for SVOCs using method 8270C. Detectable SVOCs in overlying soil samples are identified in the table and all other SVOCs were below detection limits (see corresponding laboratory report).

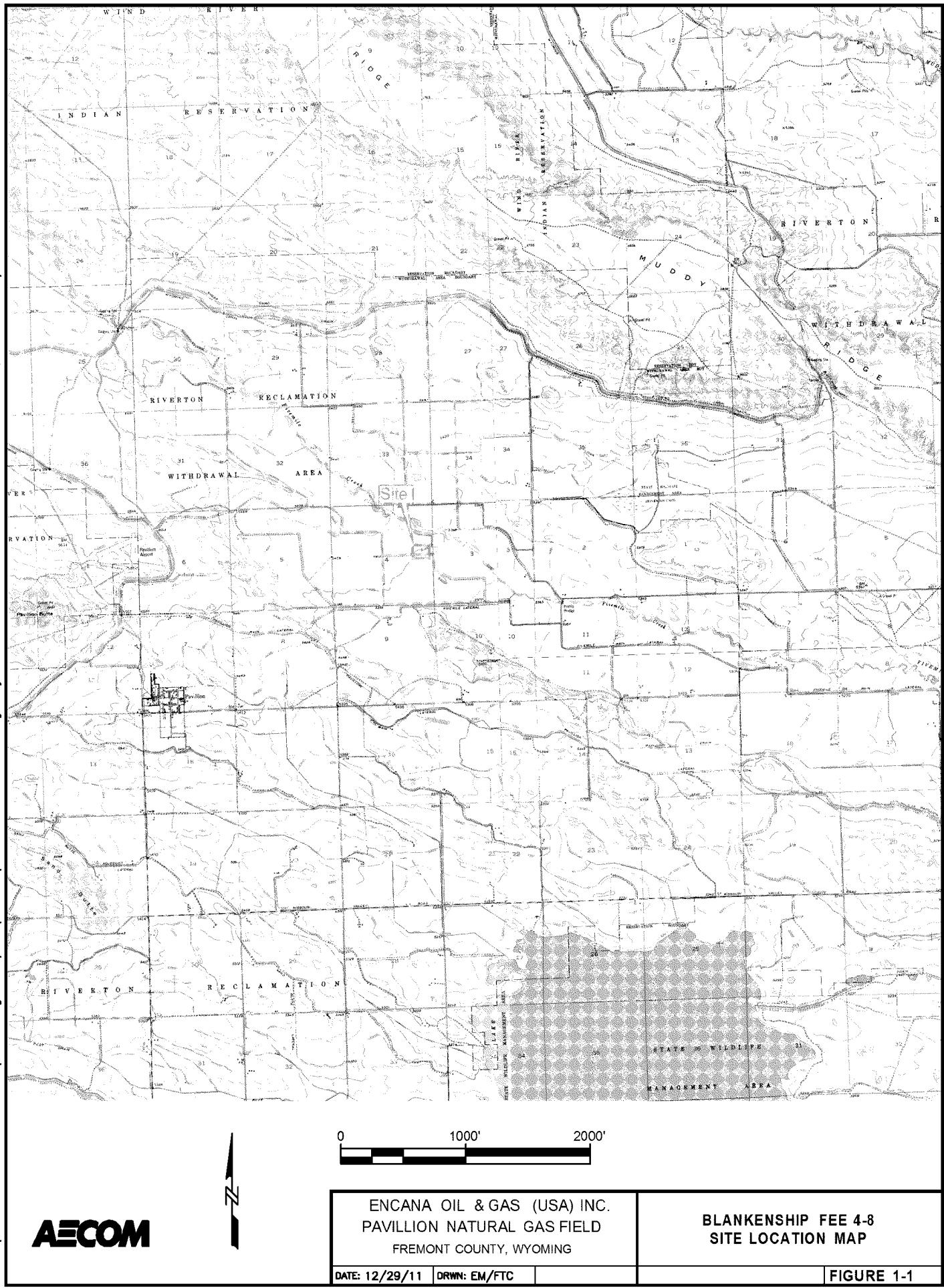
² Groundwater cleanup levels are based on the Wyoming Department of Environmental Quality/Solid and Hazardous Waste Division (DEQ/SHWD) cleanup level spreadsheet effective June 30, 2009.

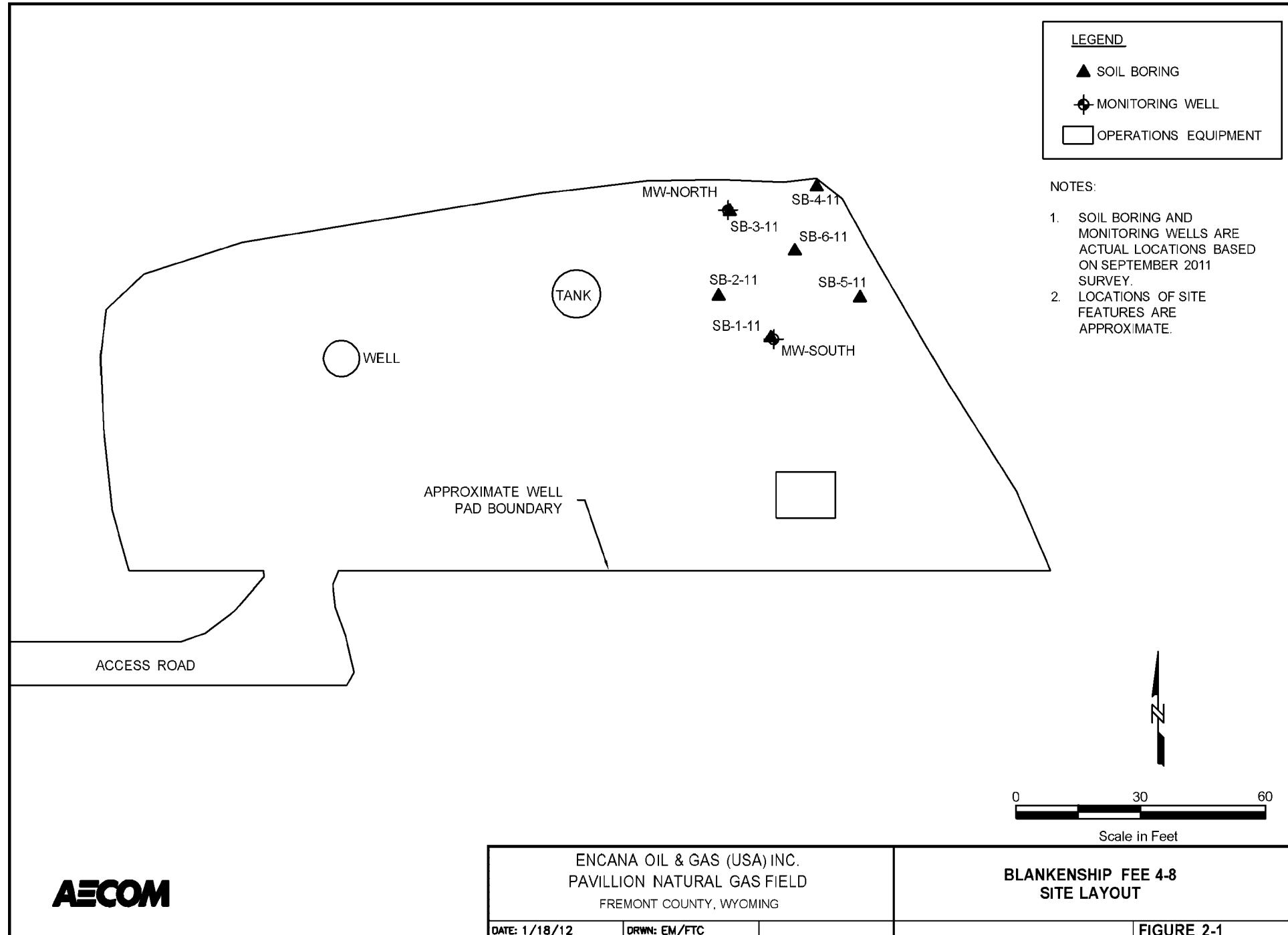
³ This level is applicable when naphthalene and/or methylnaphthalenes are detected in groundwater at measurable concentrations.

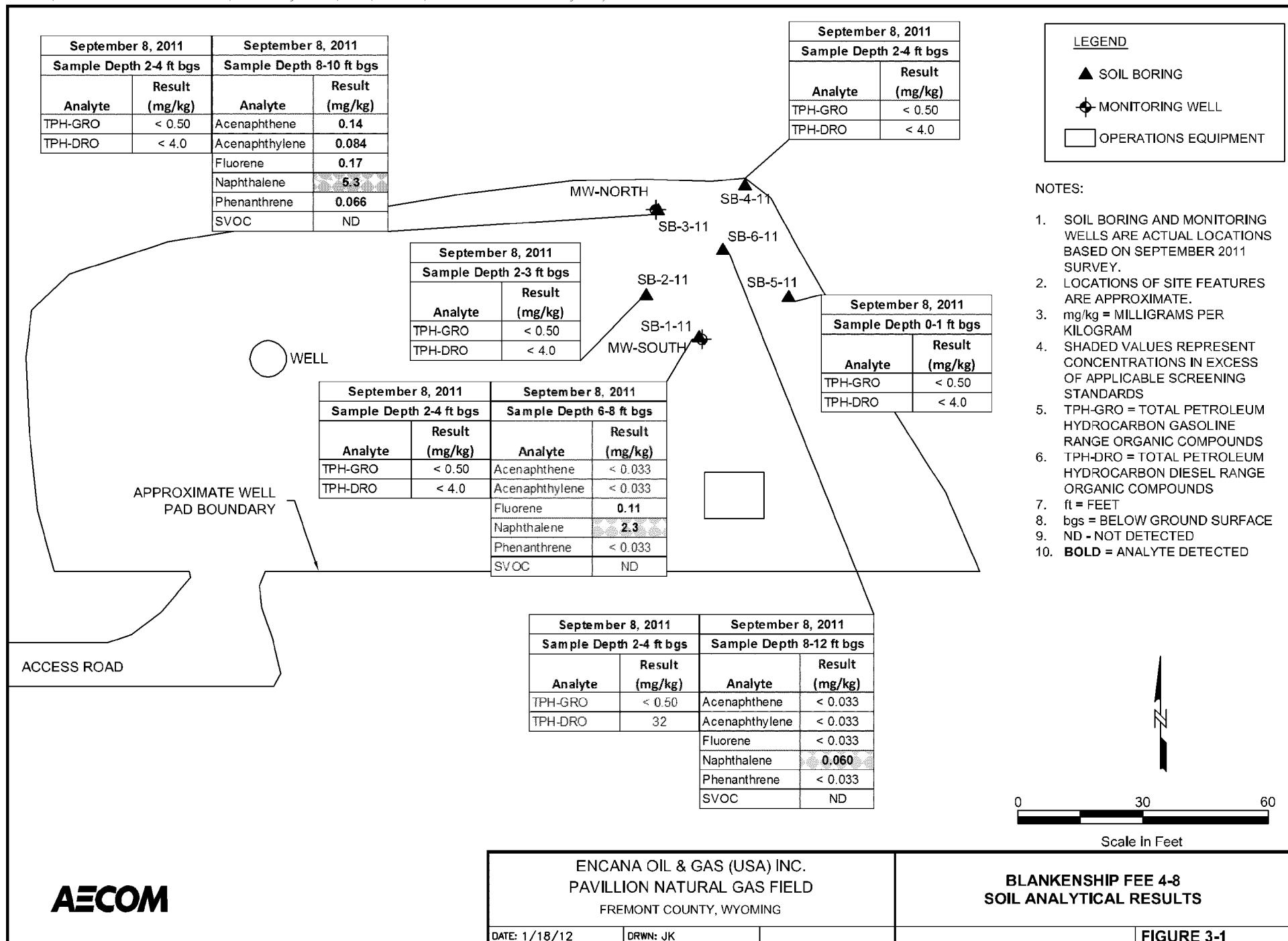
⁴ This level is applicable when naphthalene and/or 2-Methylnaphthalene are below MCL/DWEL concentrations in groundwater along with the other chemicals of concern AND no free product is present on the groundwater table.

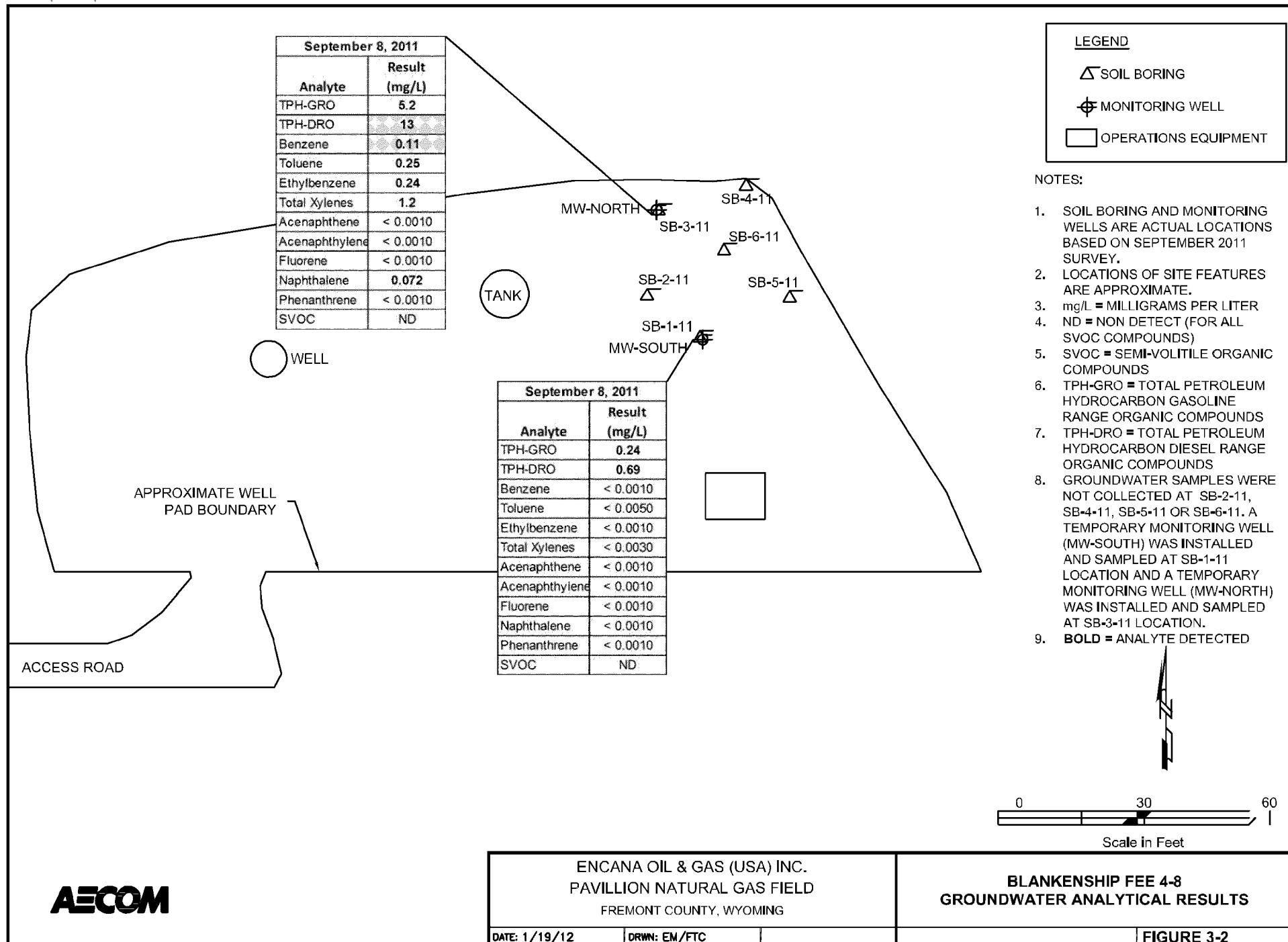
Figures

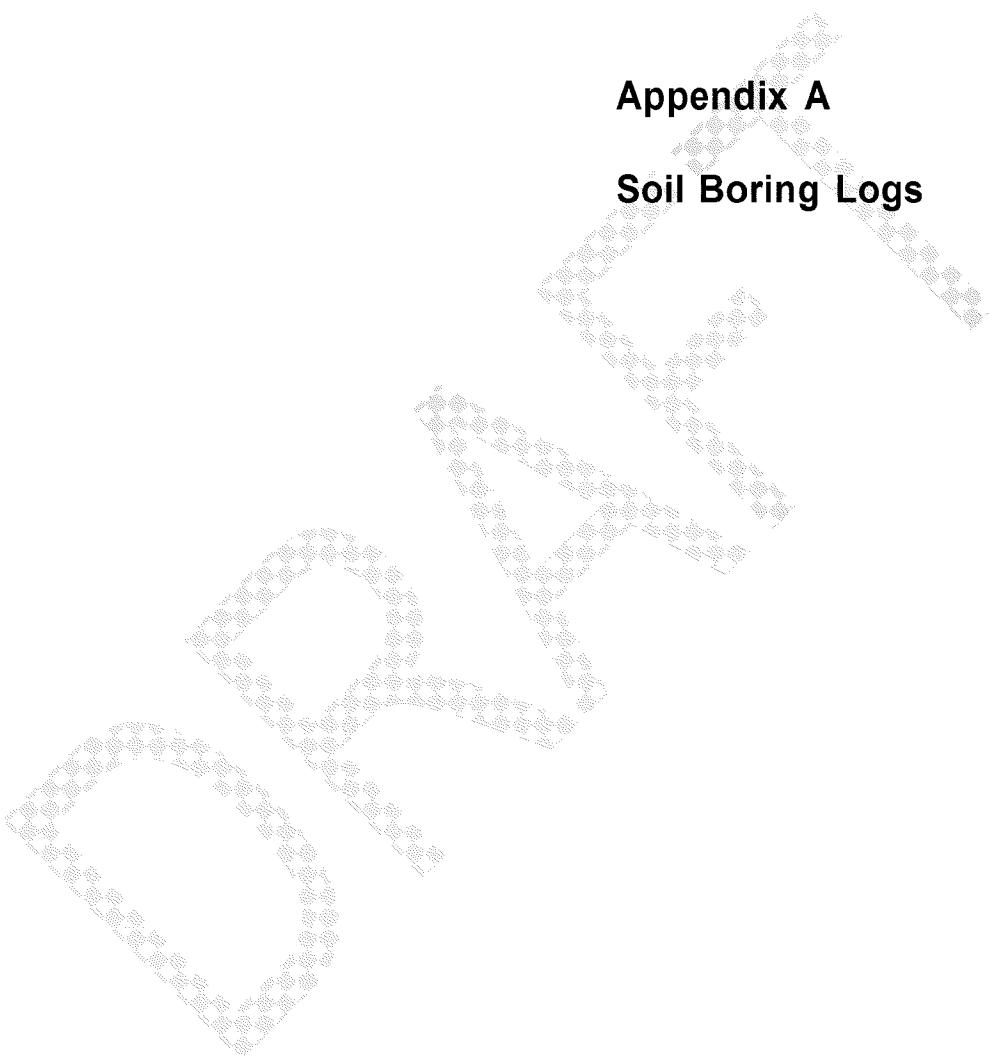












Appendix A

Soil Boring Logs



NOTES:

Blow count not recorded for Geoprobe Rig

DP= direct Push, 4 foot acetate sleeve

Boring abandoned with bentonite chips

NA = not applicable

ppm = parts per million

TBD = to be determined

ft = feet

bgs = below ground surface

Checked by: Jeremy Hurshman

Date: 11/30/11



Project Information							Geological Description		
Client: Encana Oil & Gas (USA) Inc.							BORING ID:		
Project Number: 60221849							SB-2-11(BF-4-8)		
Site Location: Pavillion, WY							Sheet: 1 of 1		
Coordinates: TBD		Elevation: TBD					Monitoring Well Installed: No		
Drilling Method: Geoprobe Direct Push									
Sample Type(s): Soil		Boring Diameter: 2-inch					Screened Interval: NA		
Drilling Contractor: Inberg-Miller Engineers			Logged By: D. Fairchild		Date/Time Started: 9/8/11 09:15		Depth of Boring: 2.5 ft		
			Ground Elevation: TBD		Date/Time Finished: 9/8/11 09:20		Water Level: 2.5 ft		
Depth (ft)	Sample Type	Blows per 6"	Recovery (%)	Headspace (ppm)	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)		Lab Sample ID	Lab Sample Depth (ft)
						SW	ML		
1	DP			0.0	ML	6 inches to 2.5 ft. Silt and clay with some sand, no stain, no odor.			0-2.5
2									
3						Total Depth = 2.5 ft			
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

NOTES:
 Blow count not recorded for Geoprobe Rig
 DP= direct Push, 4 foot acetate sleeve
 Boring abandoned with bentonite chips
 NA – not applicable

ppm = parts per million
 TBD = to be determined
 ft = feet
 bgs – below ground surface

Checked by: Jeremy Hurshman Date: 11/30/11

NOTES.

Blow count not recorded for Geoprobe Rig

Blow count not recorded for Geoprobe
DB= direct Push, 4 foot acetate sleeve

DP= direct Push, 4 foot acetate sleeve
Boring abandoned with bentonite chips

Boring abandoned w
NA = not applicable

ppm = parts per million

TBD = to be determined

$f_{\text{BD}} = f$

bgs = below ground surface

Checked by: Jeremy Hurshman

Date: 11/30/11

EPAPAV0047591

		Client: Encana Oil & Gas (USA) Inc. Project Number: 60221849 Site Location: Pavillion, WY Coordinates: TBD Elevation: TBD Drilling Method: Geoprobe Direct Push Sample Type(s): Soil					BORING ID: SB-3-11(BF 4-8) Sheet: 1 of 1 Monitoring Well Installed: Yes Screened Interval: 1-11 ft										
		Drilling Contractor: Inberg-Miller Engineers		Logged By: D. Fairchild		Date/Time Started: 9/8/11 08:35		Depth of Boring: 16 ft									
				Ground Elevation: TBD		Date/Time Finished: 9/8/11 09:00		Water Level: 2.5 ft									
1	DP	Blows per 6"	Recovery (%)	Headspace (ppm)	U.S.C.S.	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)		Lab Sample ID	Lab Sample Depth (ft)								
2	DP			0.6	CL	0 to 2 inches. Light brown loose silty clay		SB-3-11(Blankenship 4-8)(2-4) - 08:45 TPH(8015)	2-4								
3						2 inches to 4 ft. Light gray clay, no staining, no odor.											
4	DP		25	CL	CL	4 to 8 ft. Only 1 foot of recovery unable to determine interval. Brown saturated clay, no visible staining.		7-8	7-8								
5																	
6						8 to 12 ft. While pulling up rod there was visibly impacted soil in tip so continued boring. Gray clay with visible impacts and noticeable odor.											
7	DP		4000	CL													
8						12 to 16 ft. Brown sand mixed with clay no visible staining, no odor.											
9	DP		2.9	SC													
10																	
11																	
12	DP					Total Depth = 16 ft											
13																	
14	DP																
15																	
16	DP																
17																	
18	DP																
19																	
20	DP																
NOTES:																	
Blow count not recorded for Geoprobe Rig																	
DP= direct Push, 4 foot acetate sleeve																	
Boring abandoned with bentonite chips																	
NA = not applicable																	
Checked by: Jeremy Hurshman																	
Date: 11/30/11																	
ppm = parts per million																	
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ft = feet																	
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EPAPAV0047592

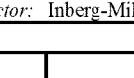
		Client: Encana Oil & Gas (USA) Inc. Project Number: 60221849 Site Location: Pavillion, WY Coordinates: TBD Elevation: TBD Drilling Method: Geoprobe Direct Push Sample Type(s): Soil Boring Diameter: 2-inch					BORING ID: SB-4-11(BF-4-8)		
Drilling Contractor: Inberg-Miller Engineers		Logged By: D. Fairchild		Date/Time Started: 9/8/11 08:15		Sheet: 1 of 1		Monitoring Well Installed: No	
		Ground Elevation: TBD		Date/Time Finished: 9/8/11 08:25		Screened Interval: N/A		Depth of Boring: 8 ft	
								Water Level: 2.5 ft	
						MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)			
1	DP	Blows per 6"	Recovery (%)	Headspace (ppm)	U.S.C.S	CL 0 to 4 ft. Minimal recovery (about 6 inches) in core brown silty clay.			Lab Sample ID 4-Feb SB-4-11(Blankenship(4-8)(2-4) TPI, DRC, SVOC
2	DP	10	0.2	-	-	4 to 8 ft. Soil too soft, no recovery.			
3						Bottom 2 inches in core tip light gray, no staining, no odor.			
4						Total Depth = 8 ft			
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
NOTES: Blow count not recorded for Geoprobe Rig DP= direct Push, 4 foot acetate sleeve Boring abandoned with bentonite chips NA = not applicable									
Checked by: Jeremy Hurshman						ppm = parts per million TBD = to be determined ft = feet bgs = below ground surface			
Date: 11/30/11									

EPAPAV0047593

		Client: Encana Oil & Gas (USA) Inc. Project Number: 60221849 Site Location: Pavillion, WY Coordinates: TBD Elevation: TBD Drilling Method: Geoprobe Direct Push Sample Type(s): Soil Boring Diameter: 2-inch					BORING ID: SB-5-11(BF-4-8) Sheet: 1 of 1	
							Monitoring Well Installed: No	
							Screened Interval: N/A	
		Drilling Contractor: Inberg-Miller Engineers		Logged By: D. Fairchild		Date/Time Started: 9/8/11 09:05		Depth of Boring: 1 ft
				Ground Elevation: TBD		Date/Time Finished: 9/8/11 09:10		Water Level: 0.5 ft
1	DP	Blows per 6"	Recovery (%)	Headspace (ppm)	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known) 0 to 1 ft. Brown sand with gravel and fines loose. No staining, no order.		
2						Total depth = 1 ft		
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
NOTES: Blow count not recorded for Geoprobe Rig DP= direct Push, 4 foot acetate sleeve Boring abandoned with bentonite chips NA = not applicable							ppm = parts per million TBD = to be determined ft = feet bgs = below ground surface	
Checked by: Jeremy Hurshman				Date: 11/30/11				
							SB-5-11(BF-4-8)(Blankenship 4-8)(0-1) ITPH	Lab Sample ID 0-1 Lab Sample Depth (ft)

EPAPAV0047594



		Client: Encana Oil & Gas (USA) Inc.		BORING ID: SB-6-11(BF-4-8)			
		Project Number: 60221849					
		Site Location: Pavillion, WY					
		Coordinates: TBD		Elevation: TBD	Sheet: 1 of 1		
		Drilling Method: Geoprobe Direct Push		Monitoring Well Installed: No			
		Sample Type(s): Soil		Boring Diameter: 2-inch	Screened Interval: NA		
Drilling Contractor: Inberg-Miller Engineers		Logged By: D. Fairchild		Date/Time Started: 9/8/11 09:26	Depth of Boring: 16 ft		
		Ground Elevation: TBD		Date/Time Finished: 9/8/11 09:55	Water Level: 2.5 ft		
MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)							
1	DP	Blows per 6"	Recovery (%)	Headspace (ppm)	U.S.C.S		
2				1.8			
3							
4							
5							
6	DP			2.4			
7							
8							
9							
10	DP			583			
11							
12							
13							
14	DP			19.2			
15				0.7			
16					Total Depth = 16 ft		
17							
18							
19							
20							
NOTES: Blow count not recorded for Geoprobe Rig DP= direct Push. 4 foot acetate sleeve Boring abandoned with bentonite chips NA = not applicable							
ppm = parts per million TBD = to be determined ft = feet bgs = below ground surface							
Checked by: Jeremy Hurshman			Date: 11/30/11				

NOTES.

Blow count not recorded for Geoprobe Rig

DP= direct Push, 4 foot acetate sleeve

BP direct Push, 4 foot acetate sleeve
Boring abandoned with bentonite chips

NA = not applicable

ppm = parts per million

TBD = to be determined

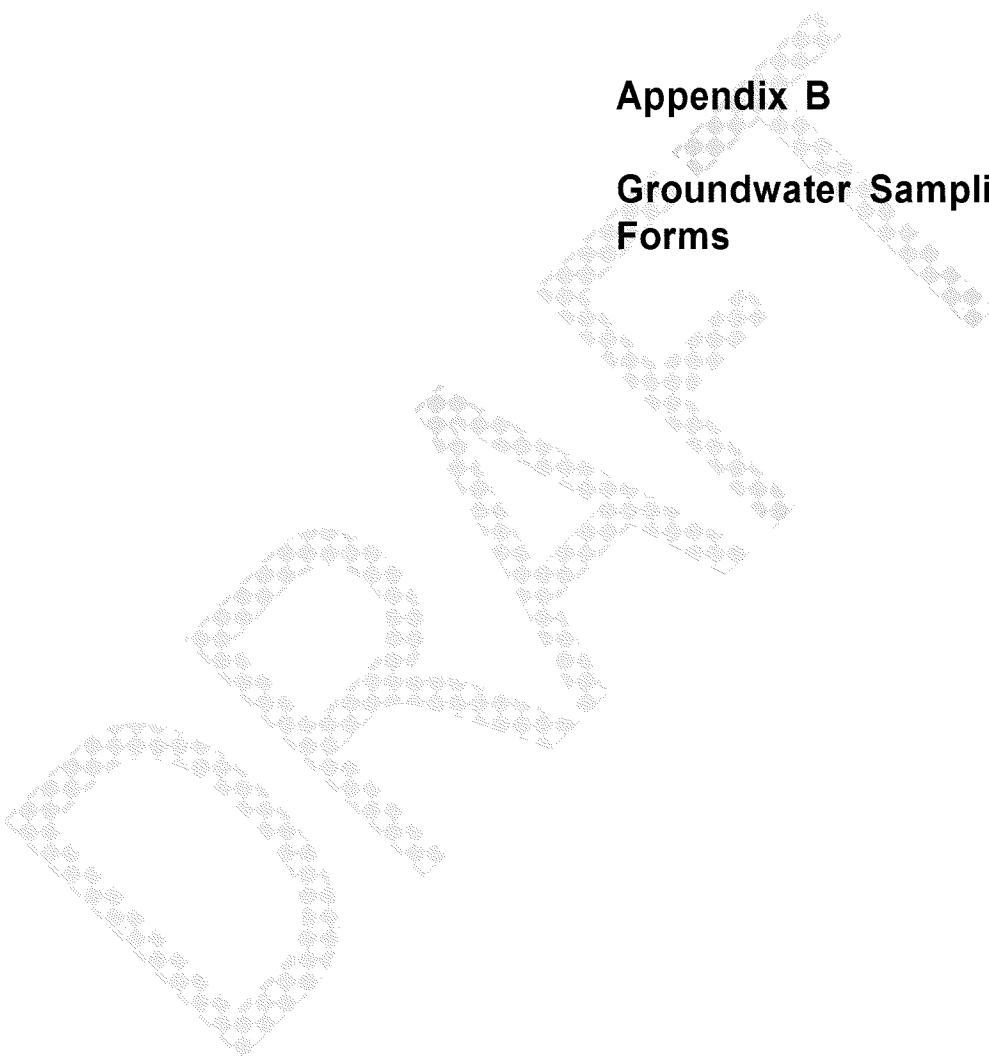
FBD
ft = feet

bgs = below ground surface

Checked by: Jeremy Hurshman

Date: 11/30/11

EPAPAV0047595



Appendix B

Groundwater Sampling

Forms



Well/Piezo ID:
SB-1-11 (BF 4-8)

Ground Water Sample Collection Record

Client:	Encana	Date:	09-08-11
Project No:	60221849	Time: Start	12:32 pm
Site Location:	BF 4-8	Stop	12:55 am
Weather Conds:	Sunny 75°F	Collector(s)	D. Fairchild

WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length	12.00	c. Casing Material	Sch 40 PVC	Well <input checked="" type="checkbox"/> Piezometer <input type="checkbox"/>	e. Length of Water Column	7.81 (a-b)
b. Water Table Depth	4.19	d. Casing Diameter	1"	f. Calculated Well Volume (gallons) 0.34 1" - 0.043 2" - 0.171 4" - 0.652		

WELL PURGING DATA

a. Purge Method (peristaltic, bailed, pump, etc.) Peristaltic pump

b. Acceptance Criteria defined (from workplan)

- Minimum Required Purge Volume (@ 1 well volumes) 0.34
- Maximum Allowable Turbidity -- NTUs
- Stabilization of parameters 10 %

c. Field Testing Equipment Used: Make Model Serial Number
 YSI 556 09B100196

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time (hr:min)	Volume Removed (gal)	Temp (°C)	pH	Spec. Cond (mS/cm)	DO (%)	DO (mg/l)	ORP (mV)	Color	Odor	Other
12:35	Initial	19.01	6.83	1.856	47.1	4.32	51.3	Light Brown	Yes	—
12:40	0.34	18.95	7.02	1.83	33.5	3.09	-7.9	Light Brown	Yes	—
12:45	0.68	19.21	7.04	2.14	42.4	3.89	-18.0	Light Brown	Yes	—
12:50	1.02	19.01	7.08	2.195	36.2	3.53	-21.0	Light Brown	Yes	—

e. Acceptance criteria pass/fail

- Has required volume been removed
Has required turbidity been reached
Have parameters stabilized
If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Peristaltic pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time	Date
SB-1-11 (BF 4-8)	1L Amber	2	None	SVOC	16:45	9/8/2011
SB-1-11 (BF 4-8)	40 mL VOA	2	HCL	BTEX	16:45	9/8/2011
SB-1-11 (BF 4-8)	40 mL VOA	2	HCL	TPH	16:45	9/8/2011
SB-1-11 (BF 4-8)	40 mL VOA	2	HCL	DRO C10-32	16:45	9/8/2011

Comments _____

Signature: Dawn Fairchild Date: September 8, 2011

Well/Piezo ID:
SB-3-11 (BF 4-8)

Ground Water Sample Collection Record

Client:	Encana	Date:	09-08-11
Project No:	60221849	Time: Start	13:08 pm
Site Location:	BF 4-8	Stop	16:40 am
Weather Conds:	Sunny 75°F	Collector(s)	D. Fairchild

WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length	12.51	c. Casing Material	Sch 40 PVC	Well <input checked="" type="checkbox"/>	Piezometer <input type="checkbox"/>
b. Water Table Depth	6.79	d. Casing Diameter	1"	e. Length of Water Column	5.72 (a-b) 1" - 0.043 2" - 0.171 4" - 0.652

WELL PURGING DATA

a. Purge Method (peristaltic, bailer, pump, etc.) Peristaltic pump

b. Acceptance Criteria defined (from workplan)

- Minimum Required Purge Volume (@ 1 well volumes) 0.25
- Maximum Allowable Turbidity -- NTUs
- Stabilization of parameters 10 %

c. Field Testing Equipment Used: Make Model Serial Number
YSI 556 09B100196

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page # _____

Time (hr:min)	Volume Removed (gal)	Temp (°C)	pH	Spec. Cond (mS/cm)	DO (%)	DO (mg/l)	ORP (mV)	Color	Odor	Other
13:22	Initial	14.48	7.84	10.23	41.4	3.89	-68.2	Brown	Yes	--
13:00	0.25	13.79	7.89	9.645	26.3	2.62	-70.6	Brown	Yes	--
13:40	0.50	14.69	7.71	8.721	21.1	2.06	-74.9	Brown	Yes	--
13:45	0.75	14.55	7.60	8.839	15.3	1.51	-80.9	Brown	Yes	--

e. Acceptance criteria pass/fail

Has required volume been removed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Has required turbidity been reached	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have parameters stabilized	<input checked="" type="checkbox"/>	<input type="checkbox"/>

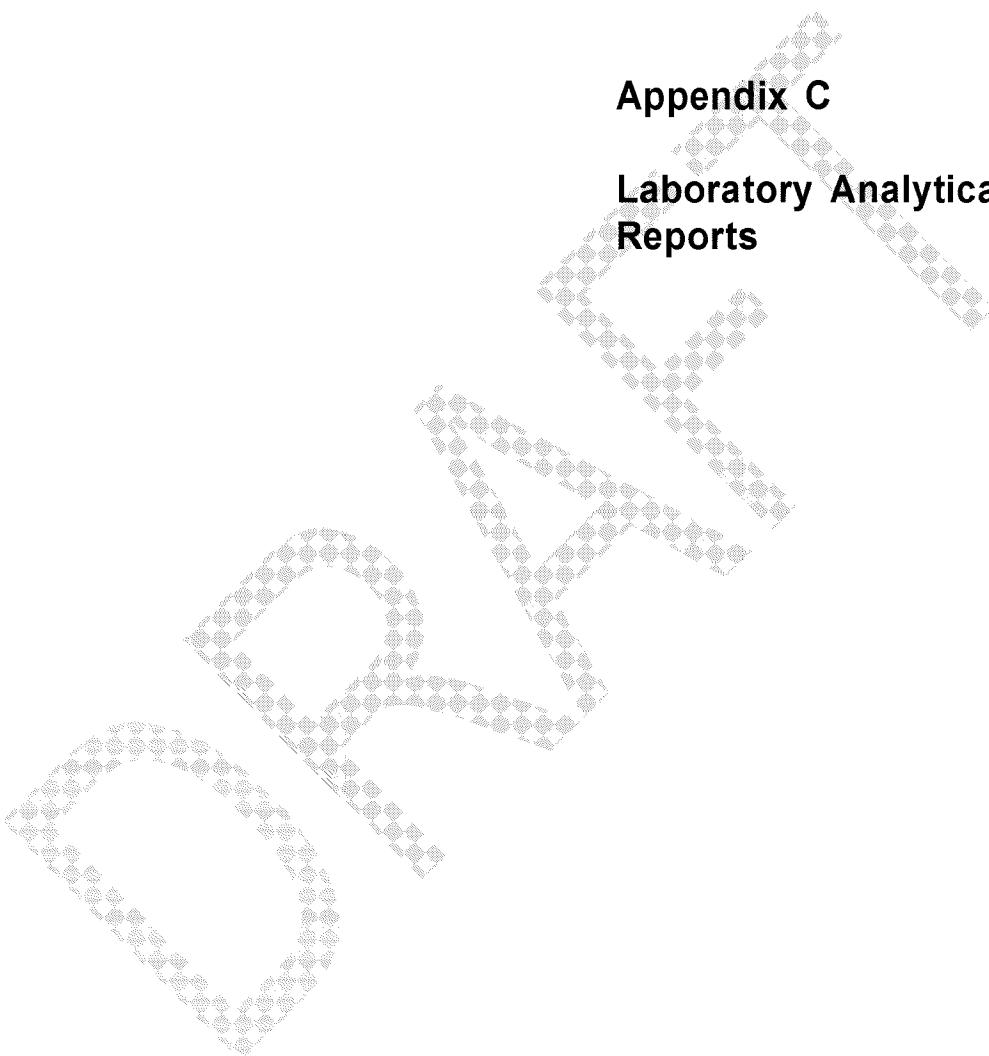
If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Peristaltic pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time	Date
SB-3-11 (BF 4-8)	1L Amber	2	None	SVOC	16:35	9/8/2011
SB-3-11 (BF 4-8)	40 mL VOA	2	HCL	BTEX	16:35	9/8/2011
SB-3-11 (BF 4-8)	40 mL VOA	2	HCL	TPH	16:35	9/8/2011
SB-3-11 (BF 4-8)	40 mL VOA	2	HCL	DRO C10-32	16:35	9/8/2011

Comments

Signature: Dawn Fairchild Date: September 8, 2011



Appendix C

Laboratory Analytical Reports



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
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Fax (615) 758-5859
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Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Report Summary

Monday September 19, 2011

Report Number: L535444

Samples Received: 09/10/11

Client Project: 60221849

Description: EnCana Pavillion

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

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Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011 ESC Sample # : L535444-01
Description : EnCana Pavillion Site ID : PAVILLION WY
Sample ID : SB-1-11 BLANKENSHIP 4-8 2-4 FT Project # : 60221849
Collected By : Dawn Fairchild
Collection Date : 09/08/11 10:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	BDL 92.1	0.50	mg/kg % Rec.	GRO	09/11/11	5
DRO Wyoming C10-C32						
TPH (GC/FID) High Fraction Surrogate recovery(%) o-Terphenyl	BDL 57.8	4.0	mg/kg % Rec.	8015	09/16/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-2-11 BLANKENSHIP 4-8 2-3 FT
Collected By : Dawn Fairchild
Collection Date : 09/08/11 09:17

ESC Sample # : L535444-02
Site ID : PAVILLION WY
Project # : 60221849

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	BDL 92.0	0.50	mg/kg % Rec.	GRO	09/11/11	5
DRO Wyoming C10-C32 TPH (GC/FID) High Fraction Surrogate recovery(%) o-Terphenyl	BDL 62.3	4.0	mg/kg % Rec.	8015	09/19/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-3-11 BLANKENSHIP 4-8 2-4 FT
Collected By : Dawn Fairchild
Collection Date : 09/08/11 08:45

ESC Sample # : L535444-03
Site ID : PAVILLION WY
Project # : 60221849

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	BDL 102.	0.50	mg/kg % Rec.	GRO	09/11/11	5
DRO Wyoming C10-C32 TPH (GC/FID) High Fraction Surrogate recovery(%) o-Terphenyl	BDL 57.4	4.0	mg/kg % Rec.	8015	09/16/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011 ESC Sample # : L535444-04
Description : EnCana Pavillion Site ID : PAVILLION WY
Sample ID : SB-4-11 BLANKENSHIP 4-8 2-4 FT Project # : 60221849
Collected By : Dawn Fairchild
Collection Date : 09/08/11 08:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	09/10/11	5
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.4		% Rec.	GRO	09/10/11	5
DRO Wyoming C10-C32						
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015	09/16/11	1
Surrogate recovery(%) o-Terphenyl	60.8		% Rec.	8015	09/16/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-5-11 BLANKENSHIP 4-8 0-1 FT
Collected By : Dawn Fairchild
Collection Date : 09/08/11 09:09

ESC Sample # : L535444-05

Site ID : PAVILLION WY

Project # : 60221849

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	BDL 96.7	0.50	mg/kg % Rec.	GRO GRO	09/11/11 09/11/11	5 5
DRO Wyoming C10-C32 TPH (GC/FID) High Fraction Surrogate recovery(%) o-Terphenyl	BDL 54.3	4.0	mg/kg % Rec.	8015 8015	09/16/11 09/16/11	1 1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011 ESC Sample # : L535444-06
Description : EnCana Pavillion Site ID : PAVILLION WY
Sample ID : SB-6-11 BLANKENSHIP 4-8 2-4 FT Project # : 60221849
Collected By : Dawn Fairchild
Collection Date : 09/08/11 09:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction Surrogate Recovery-%	BDL	0.50	mg/kg	GRO	09/11/11	5
a,a,a-Trifluorotoluene (FID)	96.4		% Rec.	GRO	09/11/11	5
DRO Wyoming C10-C32						
TPH (GC/FID) High Fraction Surrogate recovery(%)	32.	4.0	mg/kg	8015	09/16/11	1
o-Terphenyl	53.9		% Rec.	8015	09/16/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-6-11 BLANKENSHIP 4-8 8-12 FT
Collected By : Dawn Fairchild
Collection Date : 09/08/11 10:45

ESC Sample # : L535444-07
Site ID : PAVILLION WY
Project # : 60221849

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Base/Neutral Extractables						
Acenaphthene	BDL	0.033	mg/kg	8270C	09/15/11	1
Acenaphthylene	BDL	0.033	mg/kg	8270C	09/15/11	1
Anthracene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzidine	BDL	0.33	mg/kg	8270C	09/15/11	1
Benzo(a)anthracene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzo(b)fluoranthene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzo(k)fluoranthene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzo(g,h,i)perylene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzo(a)pyrene	BDL	0.033	mg/kg	8270C	09/15/11	1
Bis(2-chlorethoxy)methane	BDL	0.33	mg/kg	8270C	09/15/11	1
Bis(2-chloroethyl)ether	BDL	0.33	mg/kg	8270C	09/15/11	1
Bis(2-chloroisopropyl)ether	BDL	0.33	mg/kg	8270C	09/15/11	1
4-Bromophenyl-phenylether	BDL	0.33	mg/kg	8270C	09/15/11	1
2-Chloronaphthalene	BDL	0.033	mg/kg	8270C	09/15/11	1
4-Chlorophenyl-phenylether	BDL	0.33	mg/kg	8270C	09/15/11	1
Chrysene	BDL	0.033	mg/kg	8270C	09/15/11	1
Dibenz(a,h)anthracene	BDL	0.033	mg/kg	8270C	09/15/11	1
3,3-Dichlorobenzidine	BDL	0.33	mg/kg	8270C	09/15/11	1
2,4-Dinitrotoluene	BDL	0.33	mg/kg	8270C	09/15/11	1
2,6-Dinitrotoluene	BDL	0.33	mg/kg	8270C	09/15/11	1
Fluoranthene	BDL	0.033	mg/kg	8270C	09/15/11	1
Fluorene	BDL	0.033	mg/kg	8270C	09/15/11	1
Hexachlorobenzene	BDL	0.33	mg/kg	8270C	09/15/11	1
Hexachloro-1,3-butadiene	BDL	0.33	mg/kg	8270C	09/15/11	1
Hexachlorocyclopentadiene	BDL	0.33	mg/kg	8270C	09/15/11	1
Hexachloroethane	BDL	0.33	mg/kg	8270C	09/15/11	1
Indeno(1,2,3-cd)pyrene	BDL	0.033	mg/kg	8270C	09/15/11	1
Isophorone	BDL	0.33	mg/kg	8270C	09/15/11	1
Naphthalene	0.060	0.033	mg/kg	8270C	09/15/11	1
Nitrobenzene	BDL	0.33	mg/kg	8270C	09/15/11	1
n-Nitrosodimethylamine	BDL	0.33	mg/kg	8270C	09/15/11	1
n-Nitrosodiphenylamine	BDL	0.33	mg/kg	8270C	09/15/11	1
n-Nitrosodi-n-propylamine	BDL	0.33	mg/kg	8270C	09/15/11	1
Phenanthrone	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzylbutyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Bis(2-ethylhexyl)phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Di-n-butyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Diethyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Dimethyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Di-n-octyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Pyrene	BDL	0.033	mg/kg	8270C	09/15/11	1
1,2,4-Trichlorobenzene	BDL	0.33	mg/kg	8270C	09/15/11	1
Acid Extractables						

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-6-11 BLANKENSHIP 4-8 8-12 FT
Collected By : Dawn Fairchild
Collection Date : 09/08/11 10:45

ESC Sample # : L535444-07

Site ID : PAVILLION WY
Project # : 60221849

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Chloro-3-methylphenol	BDL	0.33	mg/kg	8270C	09/15/11	1
2-Chlorophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
2,4-Dichlorophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
2,4-Dimethylphenol	BDL	0.33	mg/kg	8270C	09/15/11	1
4,6-Dinitro-2-methylphenol	BDL	0.33	mg/kg	8270C	09/15/11	1
2,4-Dinitrophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
2-Nitrophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
4-Nitrophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
Pentachlorophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
Phenol	BDL	0.33	mg/kg	8270C	09/15/11	1
2,4,6-Trichlorophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
Surrogate Recovery						
2-Fluorophenol	59.4	% Rec.	8270C	09/15/11	1	
Phenol-d5	88.4	% Rec.	8270C	09/15/11	1	
Nitrobenzene-d5	90.2	% Rec.	8270C	09/15/11	1	
2-Fluorobiphenyl	83.6	% Rec.	8270C	09/15/11	1	
2,4,6-Tribromophenol	77.3	% Rec.	8270C	09/15/11	1	
p-Terphenyl-d14	86.4	% Rec.	8270C	09/15/11	1	

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/19/11 14:41 Printed: 09/19/11 14:42

Page 9 of 24

EPAPAV0047608



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-1-11 BLANKENSHIP 4-8 6-8 FT
Collected By : Dawn Fairchild
Collection Date : 09/08/11 10:40

ESC Sample # : L535444-08
Site ID : PAVILLION WY
Project # : 60221849

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Base/Neutral Extractables						
Acenaphthene	BDL	0.033	mg/kg	8270C	09/15/11	1
Acenaphthylene	BDL	0.033	mg/kg	8270C	09/15/11	1
Anthracene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzidine	BDL	0.33	mg/kg	8270C	09/15/11	1
Benzo(a)anthracene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzo(b)fluoranthene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzo(k)fluoranthene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzo(g,h,i)perylene	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzo(a)pyrene	BDL	0.033	mg/kg	8270C	09/15/11	1
Bis(2-chlorethoxy)methane	BDL	17.	mg/kg	8270C	09/16/11	50
Bis(2-chloroethyl)ether	BDL	17.	mg/kg	8270C	09/16/11	50
Bis(2-chloroisopropyl)ether	BDL	17.	mg/kg	8270C	09/16/11	50
4-Bromophenyl-phenylether	BDL	0.33	mg/kg	8270C	09/15/11	1
2-Chloronaphthalene	BDL	0.033	mg/kg	8270C	09/15/11	1
4-Chlorophenyl-phenylether	BDL	0.33	mg/kg	8270C	09/15/11	1
Chrysene	BDL	0.033	mg/kg	8270C	09/15/11	1
Dibenz(a,h)anthracene	BDL	0.033	mg/kg	8270C	09/15/11	1
3,3-Dichlorobenzidine	BDL	0.33	mg/kg	8270C	09/15/11	1
2,4-Dinitrotoluene	BDL	0.33	mg/kg	8270C	09/15/11	1
2,6-Dinitrotoluene	BDL	0.33	mg/kg	8270C	09/15/11	1
Fluoranthene	BDL	0.033	mg/kg	8270C	09/15/11	1
Fluorene	0.11	0.033	mg/kg	8270C	09/15/11	1
Hexachlorobenzene	BDL	0.33	mg/kg	8270C	09/15/11	1
Hexachloro-1,3-butadiene	BDL	17.	mg/kg	8270C	09/16/11	50
Hexachlorocyclopentadiene	BDL	0.33	mg/kg	8270C	09/15/11	1
Hexachloroethane	BDL	17.	mg/kg	8270C	09/16/11	50
Indeno(1,2,3-cd)pyrene	BDL	0.033	mg/kg	8270C	09/15/11	1
Isophorone	BDL	17.	mg/kg	8270C	09/16/11	50
Naphthalene	2.3	1.6	mg/kg	8270C	09/16/11	50
Nitrobenzene	BDL	17.	mg/kg	8270C	09/16/11	50
n-Nitrosodimethylamine	BDL	17.	mg/kg	8270C	09/16/11	50
n-Nitrosodiphenylamine	BDL	0.33	mg/kg	8270C	09/15/11	1
n-Nitrosodi-n-propylamine	BDL	17.	mg/kg	8270C	09/16/11	50
Phenanthrone	BDL	0.033	mg/kg	8270C	09/15/11	1
Benzylbutyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Bis(2-ethylhexyl)phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Di-n-butyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Diethyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Dimethyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Di-n-octyl phthalate	BDL	0.33	mg/kg	8270C	09/15/11	1
Pyrene	BDL	0.033	mg/kg	8270C	09/15/11	1
1,2,4-Trichlorobenzene	BDL	17.	mg/kg	8270C	09/16/11	50
Acid Extractables						

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)
L535444-08 (SV8270BNA) - Dilution due to matrix



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Est. 1970

REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion

ESC Sample # : L535444-08

Sample ID : SB-1-11 BLANKENSHIP 4-8 6-8 FT

Site ID : PAVILLION WY

Collected By : Dawn Fairchild
Collection Date : 09/08/11 10:40

Project # : 60221849

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Chloro-3-methylphenol	BDL	17.	mg/kg	8270C	09/16/11	50
2-Chlorophenol	BDL	17.	mg/kg	8270C	09/16/11	50
2,4-Dichlorophenol	BDL	17.	mg/kg	8270C	09/16/11	50
2,4-Dimethylphenol	BDL	17.	mg/kg	8270C	09/16/11	50
4,6-Dinitro-2-methylphenol	BDL	0.33	mg/kg	8270C	09/15/11	1
2,4-Dinitrophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
2-Nitrophenol	BDL	17.	mg/kg	8270C	09/16/11	50
4-Nitrophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
Pentachlorophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
Phenol	BDL	17.	mg/kg	8270C	09/16/11	50
2,4,6-Trichlorophenol	BDL	0.33	mg/kg	8270C	09/15/11	1
Surrogate Recovery						
2-Fluorophenol	0.00	% Rec.	8270C	09/16/11	50	
Phenol-d5	0.00	% Rec.	8270C	09/16/11	50	
Nitrobenzene-d5	0.00	% Rec.	8270C	09/16/11	50	
2-Fluorobiphenyl	70.8	% Rec.	8270C	09/15/11	1	
2,4,6-Tribromophenol	78.3	% Rec.	8270C	09/15/11	1	
p-Terphenyl-d14	71.1	% Rec.	8270C	09/15/11	1	

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 09/19/11 14:41 Printed: 09/19/11 14:42
L535444-08 (SV8270BNA) - Dilution due to matrix



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REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-3-11 BLANKENSHIP 4-8 8-10 FT
Collected By : Dawn Fairchild
Collection Date : 09/08/11 10:50

ESC Sample # : L535444-09
Site ID : PAVILLION WY
Project # : 60221849

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Base/Neutral Extractables						
Acenaphthene	0.14	0.033	mg/kg	8270C	09/16/11	1
Acenaphthylene	0.084	0.033	mg/kg	8270C	09/16/11	1
Anthracene	BDL	0.033	mg/kg	8270C	09/16/11	1
Benzidine	BDL	0.33	mg/kg	8270C	09/16/11	1
Benzo(a)anthracene	BDL	0.033	mg/kg	8270C	09/16/11	1
Benzo(b)fluoranthene	BDL	0.033	mg/kg	8270C	09/16/11	1
Benzo(k)fluoranthene	BDL	0.033	mg/kg	8270C	09/16/11	1
Benzo(g,h,i)perylene	BDL	0.033	mg/kg	8270C	09/16/11	1
Benzo(a)pyrene	BDL	0.033	mg/kg	8270C	09/16/11	1
Bis(2-chlorethoxy)methane	BDL	17.	mg/kg	8270C	09/16/11	50
Bis(2-chloroethyl)ether	BDL	17.	mg/kg	8270C	09/16/11	50
Bis(2-chloroisopropyl)ether	BDL	17.	mg/kg	8270C	09/16/11	50
4-Bromophenyl-phenylether	BDL	0.33	mg/kg	8270C	09/16/11	1
2-Chloronaphthalene	BDL	0.033	mg/kg	8270C	09/16/11	1
4-Chlorophenyl-phenylether	BDL	0.33	mg/kg	8270C	09/16/11	1
Chrysene	BDL	0.033	mg/kg	8270C	09/16/11	1
Dibenz(a,h)anthracene	BDL	0.033	mg/kg	8270C	09/16/11	1
3,3-Dichlorobenzidine	BDL	0.33	mg/kg	8270C	09/16/11	1
2,4-Dinitrotoluene	BDL	0.33	mg/kg	8270C	09/16/11	1
2,6-Dinitrotoluene	BDL	0.33	mg/kg	8270C	09/16/11	1
Fluoranthene	BDL	0.033	mg/kg	8270C	09/16/11	1
Fluorene	0.17	0.033	mg/kg	8270C	09/16/11	1
Hexachlorobenzene	BDL	0.33	mg/kg	8270C	09/16/11	1
Hexachloro-1,3-butadiene	BDL	17.	mg/kg	8270C	09/16/11	50
Hexachlorocyclopentadiene	BDL	0.33	mg/kg	8270C	09/16/11	1
Hexachloroethane	BDL	17.	mg/kg	8270C	09/16/11	50
Indeno(1,2,3-cd)pyrene	BDL	0.033	mg/kg	8270C	09/16/11	1
Isophorone	BDL	17.	mg/kg	8270C	09/16/11	50
Naphthalene	5.3	1.6	mg/kg	8270C	09/16/11	50
Nitrobenzene	BDL	17.	mg/kg	8270C	09/16/11	50
n-Nitrosodimethylamine	BDL	17.	mg/kg	8270C	09/16/11	50
n-Nitrosodiphenylamine	BDL	0.33	mg/kg	8270C	09/16/11	1
n-Nitrosodi-n-propylamine	BDL	17.	mg/kg	8270C	09/16/11	50
Phenanthrone	0.066	0.033	mg/kg	8270C	09/16/11	1
Benzylbutyl phthalate	BDL	0.33	mg/kg	8270C	09/16/11	1
Bis(2-ethylhexyl)phthalate	BDL	0.33	mg/kg	8270C	09/16/11	1
Di-n-butyl phthalate	BDL	0.33	mg/kg	8270C	09/16/11	1
Diethyl phthalate	BDL	0.33	mg/kg	8270C	09/16/11	1
Dimethyl phthalate	BDL	0.33	mg/kg	8270C	09/16/11	1
Di-n-octyl phthalate	BDL	0.33	mg/kg	8270C	09/16/11	1
Pyrene	BDL	0.033	mg/kg	8270C	09/16/11	1
1,2,4-Trichlorobenzene	BDL	17.	mg/kg	8270C	09/16/11	50
Acid Extractables						

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L535444-09 (SV8270BNA) - IS/SURR failed on lower dilution.



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REPORT OF ANALYSIS

September 19, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion

ESC Sample # : L535444-09

Sample ID : SB-3-11 BLANKENSHIP 4-8 8-10 FT
Collected By : Dawn Fairchild
Collection Date : 09/08/11 10:50

Site ID : PAVILLION WY

Project # : 60221849

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Chloro-3-methylphenol	BDL	17.	mg/kg	8270C	09/16/11	50
2-Chlorophenol	BDL	17.	mg/kg	8270C	09/16/11	50
2,4-Dichlorophenol	BDL	17.	mg/kg	8270C	09/16/11	50
2,4-Dimethylphenol	BDL	17.	mg/kg	8270C	09/16/11	50
4,6-Dinitro-2-methylphenol	BDL	0.33	mg/kg	8270C	09/16/11	1
2,4-Dinitrophenol	BDL	0.33	mg/kg	8270C	09/16/11	1
2-Nitrophenol	BDL	17.	mg/kg	8270C	09/16/11	50
4-Nitrophenol	BDL	0.33	mg/kg	8270C	09/16/11	1
Pentachlorophenol	BDL	0.33	mg/kg	8270C	09/16/11	1
Phenol	BDL	17.	mg/kg	8270C	09/16/11	50
2,4,6-Trichlorophenol	BDL	0.33	mg/kg	8270C	09/16/11	1
Surrogate Recovery						
2-Fluorophenol	0.00	% Rec.	8270C	09/16/11	50	
Phenol-d5	0.00	% Rec.	8270C	09/16/11	50	
Nitrobenzene-d5	0.00	% Rec.	8270C	09/16/11	50	
2-Fluorobiphenyl	86.7	% Rec.	8270C	09/16/11	1	
2,4,6-Tribromophenol	69.2	% Rec.	8270C	09/16/11	1	
p-Terphenyl-d14	59.4	% Rec.	8270C	09/16/11	1	

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/19/11 14:41 Printed: 09/19/11 14:42
L535444-09 (SV8270BNA) - IS/SURR failed on lower dilution.

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L535444-08	WG555012	SAMP	2-Fluorophenol	R1860935	J7
	WG555012	SAMP	Phenol-d5	R1860935	J7
	WG555012	SAMP	Nitrobenzene-d5	R1860935	J7
L535444-09	WG555012	SAMP	2-Fluorophenol	R1860935	J7
	WG555012	SAMP	Phenol-d5	R1860935	J7
	WG555012	SAMP	Nitrobenzene-d5	R1860935	J7

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
09/19/11 at 14:42:17

TSR Signing Reports: 044
R5 - Desired TAT

Always run BTEX by 8260 unless noted otherwise. In 9/2/11

Sample: L535444-01 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 14:41
Sample: L535444-02 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 14:41
Sample: L535444-03 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 14:41
Sample: L535444-04 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 14:41
Sample: L535444-05 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 14:41
Sample: L535444-06 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 14:41
Sample: L535444-07 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 14:41
Sample: L535444-08 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 14:41
Sample: L535444-09 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 14:41



L A B S C I E N C E S

YOUR LAB OF CHOICE

AECOM Inc. - Fort Collins, CO
Mr. Dustin Krajewski
1601 Prospect Parkway
Fort Collins, CO 80525

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Est. 1970

Quality Assurance Report
Level II

L535444

September 19, 2011

Analyte	Result	Laboratory Blank Units	% Rec.	Limit	Batch	Date Analyzed
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	< .1	mg/kg % Rec.	92.34	59-128	WG554545	09/11/11 16:25
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	< .1	mg/kg % Rec.	102.0	59-128	WG554579	09/11/11 14:28
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	< .1	mg/kg % Rec.	96.79	59-128	WG554457	09/10/11 21:24
TPH (GC/FID) High Fraction o-Terphenyl	< 4	ppm % Rec.	88.05	50-150	WG554759	09/16/11 01:11
TPH (GC/FID) High Fraction o-Terphenyl	< 4	ppm % Rec.	79.96	50-150	WG555125	09/16/11 00:38
1,2,4-Trichlorobenzene	< .333	mg/kg			WG555012	09/15/11 19:08
2,4,6-Trichlorophenol	< .333	mg/kg			WG555012	09/15/11 19:08
2,4-Dichlorophenol	< .333	mg/kg			WG555012	09/15/11 19:08
2,4-Dimethylphenol	< .333	mg/kg			WG555012	09/15/11 19:08
2,4-Dinitrophenol	< .333	mg/kg			WG555012	09/15/11 19:08
2,4-Dinitrotoluene	< .333	mg/kg			WG555012	09/15/11 19:08
2,6-Dinitrotoluene	< .333	mg/kg			WG555012	09/15/11 19:08
2-Chloronaphthalene	< .033	mg/kg			WG555012	09/15/11 19:08
2-Chlorophenol	< .333	mg/kg			WG555012	09/15/11 19:08
2-Nitrophenol	< .333	mg/kg			WG555012	09/15/11 19:08
3,3-Dichlorobenzidine	< .333	mg/kg			WG555012	09/15/11 19:08
4,6-Dinitro-2-methylphenol	< .333	mg/kg			WG555012	09/15/11 19:08
4-Bromophenyl-phenylether	< .333	mg/kg			WG555012	09/15/11 19:08
4-Chloro-3-methylphenol	< .333	mg/kg			WG555012	09/15/11 19:08
4-Chlorophenyl-phenylether	< .333	mg/kg			WG555012	09/15/11 19:08
4-Nitrophenol	< .333	mg/kg			WG555012	09/15/11 19:08
Acenaphthene	< .033	mg/kg			WG555012	09/15/11 19:08
Acenaphthylene	< .033	mg/kg			WG555012	09/15/11 19:08
Anthracene	< .033	mg/kg			WG555012	09/15/11 19:08
Benzidine	< .333	mg/kg			WG555012	09/15/11 19:08
Benzo(a)anthracene	< .033	mg/kg			WG555012	09/15/11 19:08
Benzo(a)pyrene	< .033	mg/kg			WG555012	09/15/11 19:08
Benzo(b)fluoranthene	< .033	mg/kg			WG555012	09/15/11 19:08
Benzo(g,h,i)perylene	< .033	mg/kg			WG555012	09/15/11 19:08
Benzo(k)fluoranthene	< .033	mg/kg			WG555012	09/15/11 19:08
Benzylbutyl phthalate	< .333	mg/kg			WG555012	09/15/11 19:08
Bis(2-chlorethoxy)methane	< .333	mg/kg			WG555012	09/15/11 19:08
Bis(2-chloroethyl)ether	< .333	mg/kg			WG555012	09/15/11 19:08
Bis(2-chloroisopropyl)ether	< .333	mg/kg			WG555012	09/15/11 19:08
Bis(2-ethylhexyl)phthalate	< .333	mg/kg			WG555012	09/15/11 19:08
Chrysene	< .033	mg/kg			WG555012	09/15/11 19:08
Di-n-butyl phthalate	< .333	mg/kg			WG555012	09/15/11 19:08
Di-n-octyl phthalate	< .333	mg/kg			WG555012	09/15/11 19:08
Dibenz(a,h)anthracene	< .033	mg/kg			WG555012	09/15/11 19:08
Diethyl phthalate	< .333	mg/kg			WG555012	09/15/11 19:08
Dimethyl phthalate	< .333	mg/kg			WG555012	09/15/11 19:08
Fluoranthene	< .033	mg/kg			WG555012	09/15/11 19:08
Fluorene	< .033	mg/kg			WG555012	09/15/11 19:08
Hexachloro-1,3-butadiene	< .333	mg/kg			WG555012	09/15/11 19:08

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L A B S C I E N C E S

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Est. 1970

Quality Assurance Report
Level II

L635444

September 19, 2011

Analyte	Result	Laboratory Units	Blank % Rec	Limit	Batch	Date Analyzed
Hexachlorobenzene	< .333	mg/kg			WG555012	09/15/11 19:08
Hexachlorocyclopentadiene	< .333	mg/kg			WG555012	09/15/11 19:08
Hexachloroethane	< .333	mg/kg			WG555012	09/15/11 19:08
Indeno(1,2,3-cd)pyrene	< .033	mg/kg			WG555012	09/15/11 19:08
Isophorone	< .333	mg/kg			WG555012	09/15/11 19:08
n-Nitrosodi-n-propylamine	< .333	mg/kg			WG555012	09/15/11 19:08
n-Nitrosodimethylamine	< .333	mg/kg			WG555012	09/15/11 19:08
n-Nitrosodiphenylamine	< .333	mg/kg			WG555012	09/15/11 19:08
Naphthalene	< .033	mg/kg			WG555012	09/15/11 19:08
Nitrobenzene	< .333	mg/kg			WG555012	09/15/11 19:08
Pentachlorophenol	< .333	mg/kg			WG555012	09/15/11 19:08
Phenanthrene	< .033	mg/kg			WG555012	09/15/11 19:08
Phenol	< .333	mg/kg			WG555012	09/15/11 19:08
Pyrene	< .033	mg/kg			WG555012	09/15/11 19:08
2,4,6-Tribromophenol		mg/kg	77.43	16-136	WG555012	09/15/11 19:08
2-Fluorobiphenyl		mg/kg	83.60	37-119	WG555012	09/15/11 19:08
2-Fluorophenol		mg/kg	58.62	22-114	WG555012	09/15/11 19:08
Nitrobenzene-d5		mg/kg	82.42	20-114	WG555012	09/15/11 19:08
Phenol-d5		mg/kg	91.14	26-127	WG555012	09/15/11 19:08
p-Terphenyl-d14		mg/kg	95.86	15-174	WG555012	09/15/11 19:08
TPH (GC/FID) High Fraction	< 4	ppm			WG555711	09/19/11 11:03
o-Terphenyl		% Rec.	77.05	50-150	WG555711	09/19/11 11:03

Analyte	Units	Laboratory Known Val	Control Sample Result	% Rec	Limit	Batch
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.72	122.	67-135	WG554545
a,a,a-Trifluorotoluene(FID)				97.72	59-128	WG554545
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.39	116.	67-135	WG554579
a,a,a-Trifluorotoluene(FID)				111.4	59-128	WG554579
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.62	120.	67-135	WG554457
a,a,a-Trifluorotoluene(FID)				98.23	59-128	WG554457
TPH (GC/FID) High Fraction	mg/kg	60	46.7	77.8	50-150	WG554759
o-Terphenyl				88.41	50-150	WG554759
TPH (GC/FID) High Fraction	mg/kg	60	44.4	74.0	50-150	WG555125
o-Terphenyl				84.80	50-150	WG555125
1,2,4-Trichlorobenzene	mg/kg	.333	0.252	75.6	48-87	WG555012
2,4,6-Trichlorophenol	mg/kg	.333	0.269	80.7	50-98	WG555012
2,4-Dichlorophenol	mg/kg	.333	0.280	84.0	56-96	WG555012
2,4-Dimethylphenol	mg/kg	.333	0.285	85.5	52-101	WG555012
2,4-Dinitrophenol	mg/kg	.333	0.189	56.9	10-109	WG555012
2,4-Dinitrotoluene	mg/kg	.333	0.291	87.5	54-103	WG555012
2,6-Dinitrotoluene	mg/kg	.333	0.291	87.2	53-99	WG555012
2-Chloronaphthalene	mg/kg	.333	0.306	91.8	55-96	WG555012
2-Chlorophenol	mg/kg	.333	0.262	78.5	52-88	WG555012
2-Nitrophenol	mg/kg	.333	0.271	81.5	55-106	WG555012
3,3-Dichlorobenzidine	mg/kg	.333	0.240	72.1	36-84	WG555012

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Level II

L635444

September 19, 2011

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
4,6-Dinitro-2-methylphenol	mg/kg	.333	0.244	73.4	24-98	WG555012
4-Bromophenyl-phenylether	mg/kg	.333	0.284	85.2	58-111	WG555012
4-Chloro-3-methylphenol	mg/kg	.333	0.276	82.7	58-98	WG555012
4-Chlorophenyl-phenylether	mg/kg	.333	0.272	81.8	59-103	WG555012
4-Nitrophenol	mg/kg	.333	0.223	67.1	34-101	WG555012
Acenaphthene	mg/kg	.333	0.290	87.1	55-96	WG555012
Acenaphthylene	mg/kg	.333	0.296	88.9	61-107	WG555012
Anthracene	mg/kg	.333	0.277	83.2	58-105	WG555012
Benzidine	mg/kg	.333	0.0408	12.3	10-21	WG555012
Benzo(a)anthracene	mg/kg	.333	0.292	87.6	56-103	WG555012
Benzo(a)pyrene	mg/kg	.333	0.288	86.4	57-103	WG555012
Benzo(b)fluoranthene	mg/kg	.333	0.279	83.8	52-106	WG555012
Benzo(g,h,i)perylene	mg/kg	.333	0.272	81.7	47-112	WG555012
Benzo(k)fluoranthene	mg/kg	.333	0.273	82.1	53-104	WG555012
Benzylibutyl phthalate	mg/kg	.333	0.286	85.9	61-118	WG555012
Bis(2-chloroethoxy)methane	mg/kg	.333	0.284	85.3	58-104	WG555012
Bis(2-chloroethyl)ether	mg/kg	.333	0.296	89.0	51-103	WG555012
Bis(2-chloroisopropyl)ether	mg/kg	.333	0.294	88.4	56-95	WG555012
Bis(2-ethylhexyl)phthalate	mg/kg	.333	0.295	88.7	56-120	WG555012
Chrysene	mg/kg	.333	0.288	86.6	55-102	WG555012
Di-n-butyl phthalate	mg/kg	.333	0.278	83.6	59-114	WG555012
Di-n-octyl phthalate	mg/kg	.333	0.289	86.8	51-119	WG555012
Dibenz(a,h)anthracene	mg/kg	.333	0.267	80.3	49-111	WG555012
Diethyl phthalate	mg/kg	.333	0.298	89.6	61-105	WG555012
Dimethyl phthalate	mg/kg	.333	0.297	89.3	60-106	WG555012
Fluoranthene	mg/kg	.333	0.266	79.8	59-108	WG555012
Fluorene	mg/kg	.333	0.275	82.5	59-100	WG555012
Hexachloro-1,3-butadiene	mg/kg	.333	0.270	81.0	53-106	WG555012
Hexachlorobenzene	mg/kg	.333	0.254	76.2	50-108	WG555012
Hexachlorocyclopentadiene	mg/kg	.333	0.306	92.0	36-117	WG555012
Hexachloroethane	mg/kg	.333	0.268	80.5	45-83	WG555012
Indeno(1,2,3-cd)pyrene	mg/kg	.333	0.280	84.2	50-110	WG555012
Isophorone	mg/kg	.333	0.244	73.1	51-99	WG555012
n-Nitrosodimethylamine	mg/kg	.333	0.289	86.7	52-103	WG555012
n-Nitrosodimethylamine	mg/kg	.333	0.346	104.	31-107	WG555012
n-Nitrosodiphenylamine	mg/kg	.333	0.275	82.7	57-121	WG555012
Naphthalene	mg/kg	.333	0.272	81.6	55-91	WG555012
Nitrobenzene	mg/kg	.333	0.276	82.9	47-92	WG555012
Pentachlorophenol	mg/kg	.333	0.195	58.7	10-89	WG555012
Phenanthrene	mg/kg	.333	0.280	84.1	55-103	WG555012
Phenol	mg/kg	.333	0.264	79.3	49-99	WG555012
Pyrene	mg/kg	.333	0.283	85.0	54-104	WG555012
2,4,6-Tribromophenol				74.12	16-136	WG555012
2-Fluorobiphenyl				88.81	37-119	WG555012
2-Fluorophenol				64.85	22-114	WG555012
Nitrobenzene-d5				83.54	20-114	WG555012
Phenol-d5				100.0	26-127	WG555012
p-Terphenyl-d14				85.85	15-174	WG555012

Analyte	Units	Laboratory Result	Control Ref	Sample %Rec	Duplicate	RPD	Limit	Limit	Batch
TPH (GC/FID) Low Fraction	mg/kg	6.72	6.72	122.	67-135	0.0400	20	20	WG554545
a,a,a-Trifluorotoluene(FID)				97.94	59-128				WG554545
TPH (GC/FID) Low Fraction	mg/kg	6.04	6.39	110.	67-135	5.70	20	20	WG554579
a,a,a-Trifluorotoluene(FID)				110.1	59-128				WG554579

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Level II

Lb35444

September 19, 2011

Analyte	Units	Laboratory Result	Control Ref	%Rec	Sample	Duplicate	Limit	RPD	Limit	Batch
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg	6.40	6.62	116.	97.20		67-135 59-128	3.45	20	WG554457 WG554457
TPH (GC/FID) High Fraction o-Terphenyl	mg/kg	48.0	46.7	80.0	89.95		50-150 50-150	2.69	20	WG554759 WG554759
TPH (GC/FID) High Fraction o-Terphenyl	mg/kg	43.3	44.4	72.0	82.94		50-150 50-150	2.65	20	WG555125 WG555125
1,2,4-Trichlorobenzene	mg/kg	0.260	0.252	78.0		48-87	3.26	20		WG555012
2,4,6-Trichlorophenol	mg/kg	0.288	0.269	86.0		50-98	7.00	20		WG555012
2,4-Dichlorophenol	mg/kg	0.285	0.280	86.0		56-96	1.88	20		WG555012
2,4-Dimethylphenol	mg/kg	0.296	0.285	89.0		52-101	3.76	20		WG555012
2,4-Dinitrophenol	mg/kg	0.203	0.189	61.0		10-109	7.07	39		WG555012
2,4-Dinitrotoluene	mg/kg	0.291	0.291	87.0		54-103	0.117	20		WG555012
2,6-Dinitrotoluene	mg/kg	0.298	0.291	89.0		53-99	2.42	20		WG555012
2-Chloronaphthalene	mg/kg	0.298	0.306	90.0		55-96	2.39	20		WG555012
2-Chlorophenol	mg/kg	0.278	0.262	84.0		52-88	6.24	20		WG555012
2-Nitrophenol	mg/kg	0.279	0.271	84.0		55-106	2.83	20		WG555012
3,3-Dichlorobenzidine	mg/kg	0.236	0.240	71.0		36-84	1.81	20		WG555012
4,6-Dinitro-2-methylphenol	mg/kg	0.254	0.244	76.0		24-98	3.71	32		WG555012
4-Bromophenyl-phenylether	mg/kg	0.324	0.284	97.0		58-111	13.3	20		WG555012
4-Chloro-3-methylphenol	mg/kg	0.261	0.276	78.0		58-98	5.40	20		WG555012
4-Chlorophenyl-phenylether	mg/kg	0.270	0.272	81.0		59-103	0.716	20		WG555012
4-Nitrophenol	mg/kg	0.218	0.223	65.0		34-101	2.64	26		WG555012
Acenaphthene	mg/kg	0.294	0.290	88.0		55-96	1.23	20		WG555012
Acenaphthylene	mg/kg	0.308	0.296	92.0		61-107	3.82	20		WG555012
Anthracene	mg/kg	0.304	0.277	91.0		58-105	9.39	20		WG555012
Benzidine	mg/kg	0.0405	0.0408	12.0		10-21	0.746	40		WG555012
Benzo(a)anthracene	mg/kg	0.283	0.292	85.0		56-103	2.96	20		WG555012
Benzo(a)pyrene	mg/kg	0.321	0.288	96.0		57-103	11.1	20		WG555012
Benzo(b)fluoranthene	mg/kg	0.296	0.279	89.0		52-106	5.88	20		WG555012
Benzo(g,h,i)perylene	mg/kg	0.316	0.272	95.0		47-112	14.8	20		WG555012
Benzo(k)fluoranthene	mg/kg	0.324	0.273	97.0		53-104	17.0	20		WG555012
Benzylbutyl phthalate	mg/kg	0.284	0.286	85.0		61-118	0.593	20		WG555012
Bis(2-chlorethoxy)methane	mg/kg	0.292	0.284	88.0		58-104	2.67	20		WG555012
Bis(2-chloroethyl)ether	mg/kg	0.271	0.296	81.0		51-103	8.99	20		WG555012
Bis(2-chloroisopropyl)ether	mg/kg	0.292	0.294	88.0		56-95	0.867	20		WG555012
Bis(2-ethylhexyl)phthalate	mg/kg	0.296	0.295	89.0		56-120	0.101	20		WG555012
Chrysene	mg/kg	0.288	0.288	86.0		55-102	0.168	20		WG555012
Di-n-butyl phthalate	mg/kg	0.300	0.278	90.0		59-114	7.42	20		WG555012
Di-n-octyl phthalate	mg/kg	0.286	0.289	86.0		51-119	0.896	22		WG555012
DibenZ(a,h)anthracene	mg/kg	0.297	0.267	89.0		49-111	10.6	20		WG555012
Diethyl phthalate	mg/kg	0.308	0.298	92.0		61-105	3.24	20		WG555012
Dimethyl phthalate	mg/kg	0.299	0.297	90.0		60-106	0.659	20		WG555012
Fluoranthene	mg/kg	0.290	0.266	87.0		59-108	8.69	20		WG555012
Fluorene	mg/kg	0.292	0.275	88.0		59-100	6.14	20		WG555012
Hexachloro-1,3-butadiene	mg/kg	0.285	0.270	86.0		53-106	5.60	20		WG555012
Hexachlorobenzene	mg/kg	0.271	0.254	81.0		50-108	6.62	20		WG555012
Hexachlorocyclopentadiene	mg/kg	0.300	0.306	90.0		36-117	2.02	20		WG555012
Hexachloroethane	mg/kg	0.265	0.268	79.0		45-83	1.26	20		WG555012
Indeno(1,2,3-cd)pyrene	mg/kg	0.313	0.280	94.0		50-110	11.1	20		WG555012
Isophorone	mg/kg	0.244	0.244	73.0		51-99	0.0786	20		WG555012
n-Nitrosodi-n-propylamine	mg/kg	0.301	0.289	90.0		52-103	4.23	20		WG555012
n-Nitrosodimethylamine	mg/kg	0.317	0.346	95.0		31-107	8.59	23		WG555012

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Analyte	Units	Laboratory		Control	Sample	Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	% Rec						
n-Nitrosodiphenylamine	mg/kg	0.319	0.275	96.0			57-121	14.6	20	WG555012
Naphthalene	mg/kg	0.274	0.272	82.0			55-91	0.717	20	WG555012
Nitrobenzene	mg/kg	0.291	0.276	87.0			47-92	5.12	20	WG555012
Pentachlorophenol	mg/kg	0.225	0.195	68.0			10-89	14.1	28	WG555012
Phenanthrene	mg/kg	0.297	0.280	89.0			55-103	5.85	20	WG555012
Phenol	mg/kg	0.275	0.264	82.0			49-99	4.03	20	WG555012
Pyrene	mg/kg	0.287	0.283	86.0			54-104	1.39	20	WG555012
2,4,6-Tribromophenol				84.05			16-136			WG555012
2-Fluorobiphenyl				86.83			37-119			WG555012
2-Fluorophenol				66.92			22-114			WG555012
Nitrobenzene-d5				85.39			20-114			WG555012
Phenol-d5				95.23			26-127			WG555012
p-Terphenyl-d14				89.41			15-174			WG555012

Analyte	Units	Matrix		Spike	TV	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res						
TPH (GC/FID) Low Fraction	mg/kg	29.2	0	5.5	106.		55-109	L535434-01	WG554545
a,a,a-Trifluorotoluene(FID)					96.60		59-128		WG554545
TPH (GC/FID) Low Fraction	mg/kg	21.3	0	5.5	77.5		55-109	L535444-03	WG554579
a,a,a-Trifluorotoluene(FID)					105.8		59-128		WG554579
TPH (GC/FID) Low Fraction	mg/kg	26.6	0	5.5	96.7		55-109	L535444-04	WG554457
a,a,a-Trifluorotoluene(FID)					95.15		59-128		WG554457
TPH (GC/FID) High Fraction	mg/kg	29.5	0	60	49.1*		50-150	L535434-01	WG554759
o-Terphenyl					54.03		50-150		WG554759
TPH (GC/FID) High Fraction	mg/kg	65.6	32.0	60	56.0		50-150	L535444-06	WG555125
o-Terphenyl					65.65		50-150		WG555125
1,2,4-Trichlorobenzene	mg/kg	0.247	0	.333	74.2		27-118	L535461-02	WG555012
2,4,6-Trichlorophenol	mg/kg	0.249	0	.333	74.7		18-140	L535461-02	WG555012
2,4-Dichlorophenol	mg/kg	0.240	0	.333	72.1		30-134	L535461-02	WG555012
2,4-Dimethylphenol	mg/kg	0.140	0	.333	42.1		13-147	L535461-02	WG555012
2,4-Dinitrophenol	mg/kg	0.167	0	.333	50.1		10-110	L535461-02	WG555012
2,4-Dinitrotoluene	mg/kg	0.287	0	.333	86.1		12-146	L535461-02	WG555012
2,6-Dinitrotoluene	mg/kg	0.288	0	.333	86.4		10-150	L535461-02	WG555012
2-Chloronaphthalene	mg/kg	0.262	0	.333	78.7		31-127	L535461-02	WG555012
2-Chlorophenol	mg/kg	0.212	0	.333	63.7		26-120	L535461-02	WG555012
2-Nitrophenol	mg/kg	0.308	0	.333	92.5		10-156	L535461-02	WG555012
3,3-Dichlorobenzidine	mg/kg	0.120	0	.333	36.2		10-127	L535461-02	WG555012
4,6-Dinitro-2-methylphenol	mg/kg	0.193	0	.333	58.0		10-124	L535461-02	WG555012
4-Bromophenyl-phenylether	mg/kg	0.277	0	.333	83.1		27-150	L535461-02	WG555012
4-Chloro-3-methylphenol	mg/kg	0.227	0	.333	68.2		24-140	L535461-02	WG555012
4-Chlorophenyl-phenylether	mg/kg	0.265	0	.333	79.6		27-142	L535461-02	WG555012
4-Nitropheno1	mg/kg	0.227	0	.333	68.1		10-166	L535461-02	WG555012
Acenaphthene	mg/kg	0.265	0	.333	79.5		30-132	L535461-02	WG555012
Acenaphthylene	mg/kg	0.281	0	.333	84.4		31-144	L535461-02	WG555012
Anthracene	mg/kg	0.249	0	.333	74.6		27-140	L535461-02	WG555012
Benzidine	mg/kg	0.000512	0	.333	0.154*		10-55	L535461-02	WG555012
Benzo(a)anthracene	mg/kg	0.258	0	.333	77.5		22-139	L535461-02	WG555012
Benzo(a)pyrene	mg/kg	0.249	0	.333	74.7		16-148	L535461-02	WG555012

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



L A B S C I E N C E S

YOUR LAB OF CHOICE

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report
Level II

L535444

September 19, 2011

Analyte	Units	Matrix		Spike	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzo(b)fluoranthene	mg/kg	0.231	0	.333	69.5	13-152	L535461-02	WG555012
Benzo(g,h,i)perylene	mg/kg	0.238	0	.333	71.6	10-137	L535461-02	WG555012
Benzo(k)fluoranthene	mg/kg	0.255	0	.333	76.5	15-152	L535461-02	WG555012
Benzylbutyl phthalate	mg/kg	0.281	0	.333	84.3	20-168	L535461-02	WG555012
Bis(2-chloroethoxy)methane	mg/kg	0.288	0	.333	86.5	32-141	L535461-02	WG555012
Bis(2-chloroethyl)ether	mg/kg	0.263	0	.333	79.0	25-139	L535461-02	WG555012
Bis(2-chloroisopropyl)ether	mg/kg	0.243	0	.333	73.0	32-128	L535461-02	WG555012
Bis(2-ethylhexyl)phthalate	mg/kg	0.293	0	.333	88.1	20-163	L535461-02	WG555012
Chrysene	mg/kg	0.258	0	.333	77.5	20-139	L535461-02	WG555012
Di-n-butyl phthalate	mg/kg	0.252	0	.333	75.8	24-149	L535461-02	WG555012
Di-n-octyl phthalate	mg/kg	0.274	0	.333	82.1	14-164	L535461-02	WG555012
Dibenz(a,h)anthracene	mg/kg	0.236	0	.333	70.8	10-137	L535461-02	WG555012
Diethyl phthalate	mg/kg	0.269	0	.333	80.8	28-142	L535461-02	WG555012
Dimethyl phthalate	mg/kg	0.275	0	.333	82.6	31-142	L535461-02	WG555012
Fluoranthene	mg/kg	0.235	0	.333	70.5	24-145	L535461-02	WG555012
Fluorene	mg/kg	0.259	0	.333	77.7	30-138	L535461-02	WG555012
Hexachloro-1,3-butadiene	mg/kg	0.269	0	.333	80.9	29-136	L535461-02	WG555012
Hexachlorobenzene	mg/kg	0.232	0	.333	69.6	26-136	L535461-02	WG555012
Hexachlorocyclopentadiene	mg/kg	0.270	0	.333	81.0	10-124	L535461-02	WG555012
Hexachloroethane	mg/kg	0.249	0	.333	74.8	21-107	L535461-02	WG555012
Indeno(1,2,3-cd)pyrene	mg/kg	0.245	0	.333	73.4	10-139	L535461-02	WG555012
Isophorone	mg/kg	0.221	0	.333	66.5	26-134	L535461-02	WG555012
n-Nitrosodi-n-propylamine	mg/kg	0.292	0	.333	87.7	24-141	L535461-02	WG555012
n-Nitrosodimethylamine	mg/kg	0.263	0	.333	79.0	18-126	L535461-02	WG555012
n-Nitrosodiphenylamine	mg/kg	0.227	0	.333	68.2	16-128	L535461-02	WG555012
Naphthalene	ng/kg	0.244	0	.333	73.2	31-124	L535461-02	WG555012
Nitrobenzene	mg/kg	0.276	0	.333	83.0	22-122	L535461-02	WG555012
Pentachlorophenol	mg/kg	0.170	0	.333	51.1	10-124	L535461-02	WG555012
Phenanthrene	mg/kg	0.249	0	.333	74.9	25-139	L535461-02	WG555012
Phenol	mg/kg	0.202	0	.333	60.6	22-129	L535461-02	WG555012
Pyrene	mg/kg	0.259	0	.333	77.8	23-145	L535461-02	WG555012
2,4,6-Tribromophenol					71.79	16-136		WG555012
2-Fluorobiphenyl					83.33	37-119		WG555012
2-Fluorophenol					50.21	22-114		WG555012
Nitrobenzene-d5					80.98	20-114		WG555012
Phenol-d5					72.36	26-127		WG555012
p-Terphenyl-d14					82.70	15-174		WG555012
TPH (GC/FID) High Fraction	mg/kg	35.3	0	60	58.9	50-150	L536666-04	WG555711
o-Terphenyl					55.98	50-150		WG555711

Analyte	Units	Matrix		Spike	Duplicate	Limit	RPD	Limit Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	25.5	29.2	92.6	55-109	13.6	20	L535434-01	WG5544545
a,a,a-Trifluorotoluene(FID)				95.75	59-128				WG5544545
TPH (GC/FID) Low Fraction	mg/kg	17.7	21.3	64.2	55-109	18.8	20	L535444-03	WG5544579
a,a,a-Trifluorotoluene(FID)				104.6	59-128				WG5544579
TPH (GC/FID) Low Fraction	mg/kg	29.2	26.6	106.	55-109	9.33	20	L535444-04	WG5544457
a,a,a-Trifluorotoluene(FID)				96.96	59-128				WG5544457
TPH (GC/FID) High Fraction	mg/kg	30.5	29.5	50.9	50-150	3.56	20	L535434-01	WG5544759
c-Terphenyl				57.03	50-150				WG5544759

* Performance of this Analyte is outside of established criteria.

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L A B S C I E N C E S

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Quality Assurance Report
Level II

L635444

September 19, 2011

Analyte	Units	Matrix	Spike	Duplicate	%Rec	Limit	RPD	Limit	Ref	Samp	Batch
		MSD	Ref								
TPH (GC/FID) High Fraction	mg/kg	62.3	65.6	50.5	50-150	5.13	20	L535444-06	WG555125		
o-Terphenyl				66.08	50-150				WG555125		
1,2,4-Trichlorobenzene	mg/kg	0.243	0.247	72.8	27-118	1.87	23	L535461-02	WG555012		
2,4,6-Trichlorophenol	mg/kg	0.257	0.249	77.2	18-140	3.32	26	L535461-02	WG555012		
2,4-Dichlorophenol	mg/kg	0.248	0.240	74.3	30-134	3.07	23	L535461-02	WG555012		
2,4-Dimethylphenol	mg/kg	0.108	0.140	32.4	13-147	26.2	27	L535461-02	WG555012		
2,4-Dinitrophenol	mg/kg	0.163	0.167	49.0	10-110	2.25	40	L535461-02	WG555012		
2,4-Dinitrotoluene	mg/kg	0.283	0.287	85.0	12-146	1.24	25	L535461-02	WG555012		
2,6-Dinitrotoluene	mg/kg	0.285	0.288	85.5	10-150	1.03	23	L535461-02	WG555012		
2-Chloronaphthalene	mg/kg	0.266	0.262	79.9	31-127	1.50	23	L535461-02	WG555012		
2-Chlorophenol	mg/kg	0.236	0.212	70.9	26-120	10.6	21	L535461-02	WG555012		
2-Nitrophenol	mg/kg	0.323	0.308	96.9	10-156	4.64	24	L535461-02	WG555012		
3,3-Dichlorobenzidine	mg/kg	0.0989	0.120	29.7	10-127	19.6	40	L535461-02	WG555012		
4,6-Dinitro-2-methylphenol	mg/kg	0.230	0.193	69.0	10-124	17.4	40	L535461-02	WG555012		
4-Bromophenyl-phenylether	mg/kg	0.299	0.277	89.9	27-150	7.87	20	L535461-02	WG555012		
4-Chloro-3-methylphenol	mg/kg	0.230	0.227	69.0	24-140	1.16	22	L535461-02	WG555012		
4-Chlorophenyl-phenylether	mg/kg	0.254	0.265	76.2	27-142	4.36	21	L535461-02	WG555012		
4-Nitrophenol	mg/kg	0.219	0.227	65.7	10-166	3.62	35	L535461-02	WG555012		
Acenaphthene	mg/kg	0.267	0.265	80.1	30-132	0.709	21	L535461-02	WG555012		
Acenaphthylene	mg/kg	0.287	0.281	86.2	31-144	2.19	24	L535461-02	WG555012		
Anthracene	mg/kg	0.276	0.249	82.7	27-140	10.3	20	L535461-02	WG555012		
Benzidine	mg/kg	0.000258	0.000512	0.0770*	10-55	66.1*	36	L535461-02	WG555012		
Benz(a)anthracene	mg/kg	0.270	0.258	81.1	22-139	4.51	22	L535461-02	WG555012		
Benz(a)pyrene	mg/kg	0.281	0.249	84.4	16-148	12.2	21	L535461-02	WG555012		
Benz(b)fluoranthene	mg/kg	0.284	0.231	85.1	13-152	20.2	24	L535461-02	WG555012		
Benzo(g,h,i)perylene	mg/kg	0.259	0.238	77.7	10-137	8.16	32	L535461-02	WG555012		
Benzo(k)fluoranthene	mg/kg	0.259	0.255	77.7	15-152	1.55	22	L535461-02	WG555012		
Benzylbutyl phthalate	mg/kg	0.274	0.281	82.2	20-168	2.49	23	L535461-02	WG555012		
Bis(2-chloroethoxy)methane	mg/kg	0.293	0.288	88.1	32-141	1.88	20	L535461-02	WG555012		
Bis(2-chloroethyl)ether	mg/kg	0.270	0.263	81.0	25-139	2.47	26	L535461-02	WG555012		
Bis(2-chloroisopropyl)ether	mg/kg	0.266	0.243	79.9	32-128	8.98	22	L535461-02	WG555012		
Bis(2-ethylhexyl)phthalate	mg/kg	0.276	0.293	82.9	20-163	6.12	24	L535461-02	WG555012		
Chrysene	mg/kg	0.266	0.258	79.9	20-139	3.03	23	L535461-02	WG555012		
Di-n-butyl phthalate	mg/kg	0.285	0.252	85.5	24-149	12.1	24	L535461-02	WG555012		
Di-n-octyl phthalate	mg/kg	0.277	0.274	83.3	14-164	1.36	24	L535461-02	WG555012		
Dibenz(a,h)anthracene	mg/kg	0.262	0.236	78.6	10-137	10.4	29	L535461-02	WG555012		
Diethyl phthalate	mg/kg	0.277	0.269	83.3	28-142	3.06	23	L535461-02	WG555012		
Dimethyl phthalate	mg/kg	0.273	0.275	81.9	31-142	0.897	22	L535461-02	WG555012		
Fluoranthene	mg/kg	0.268	0.235	80.6	24-145	13.3	29	L535461-02	WG555012		
Fluorene	mg/kg	0.262	0.259	78.8	30-138	1.43	22	L535461-02	WG555012		
Hexachloro-1,3-butadiene	mg/kg	0.270	0.269	81.2	29-136	0.354	22	L535461-02	WG555012		
Hexachlorobenzene	mg/kg	0.266	0.232	79.8	26-136	13.6	20	L535461-02	WG555012		
Hexachlorocyclopentadiene	mg/kg	0.278	0.270	83.4	10-124	2.93	33	L535461-02	WG555012		
Hexachloroethane	mg/kg	0.251	0.249	75.3	21-107	0.691	27	L535461-02	WG555012		
Indeno(1,2,3-cd)pyrene	mg/kg	0.273	0.245	81.9	10-139	10.9	32	L535461-02	WG555012		
Isophorone	mg/kg	0.236	0.221	70.8	26-134	6.26	20	L535461-02	WG555012		
n-Nitrosodi-n-propylamine	mg/kg	0.302	0.292	90.6	24-141	3.21	20	L535461-02	WG555012		
n-Nitrosodimethylamine	mg/kg	0.297	0.263	89.3	18-126	12.3	27	L535461-02	WG555012		
n-Nitrosodiphenylamine	mg/kg	0.255	0.227	76.5	16-128	11.6	25	L535461-02	WG555012		
Naphthalene	mg/kg	0.259	0.244	77.8	31-124	6.11	25	L535461-02	WG555012		
Nitrobenzene	mg/kg	0.280	0.276	84.1	22-122	1.29	20	L535461-02	WG555012		
Pentachlorophenol	mg/kg	0.199	0.170	59.9	10-124	15.8	34	L535461-02	WG555012		
Phenanthrene	mg/kg	0.288	0.249	86.5	25-139	14.4	25	L535461-02	WG555012		
Phenol	mg/kg	0.198	0.202	59.4	22-129	1.94	25	L535461-02	WG555012		
Pyrene	mg/kg	0.261	0.259	78.4	23-145	0.793	30	L535461-02	WG555012		
2,4,6-Tribromophenol				77.36	16-136				WG555012		
2-Fluorobiphenyl				82.76	37-119				WG555012		

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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Quality Assurance Report
Level II

L535444

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Tax I.D. 62-0814289

Est. 1970

September 19, 2011

Analyte	Units	MSD	Matrix Ref	Spike %Rec	Duplicate	Limit	RPD	Limit Ref Samp	Batch
2-Fluorophenol				62.68		22-114			
Nitrobenzene-d5				83.45		20-114			
Phenol-d5				76.44		26-127			
p-Terphenyl-d14				85.72	X	15-174			
TPH (GC/FID) High Fraction	mg/kg	39.1	35.3	65.2		50-150	10.1	20	L536666-04
o-Terphenyl				64.93		50-150			WG555711

Batch number /Run number / Sample number cross reference

WG554545: R1854154: L535444-01 02
WG554579: R1854319: L535444-03
WG554457: R1856052: L535444-04 05 06
WG554759: R1860317: L535444-01 03 04 05
WG555125: R1860320: L535444-06
WG555012: R1860935: L535444-07 08 09
WG555711: R1863372: L535444-02

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

AECOM, Inc.
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Alternate billing information:

Analysis/Container/Preservative

Chain of Custody

Prepared by

ENVIRONMENTAL SCIENCE CORP.

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E143

CoCode ENSRFCCO (lab use only)

Template/Prelogin

Shipped Via

Remarks/Contaminant Sample # (lab only)

Project Description:	EnCana Pavillion		City/Site Collected	WY				Phone (615) 758-5858	
Phone: 970-493-8878	Client Project #:			ESC Key:	ENSRFCCO-ENCANAPA			Phone (800) 767-5859	
FAX:	(60221849)							FAX (615) 758-5859	
Collected by: <i>Dawn Fanchild</i>	Site/Facility ID#:	Pavillion, WY		P.O. #:					
Collected by (signature): <i>Dawn Fanchild</i>	Rush?	(Lab MUST Be Notified)		Date Results Needed:	No. of Cntrs				E143
	<input type="checkbox"/>	Same Day.....200%		Email? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes					CoCode ENSRFCCO (lab use only)
	<input type="checkbox"/>	Next Day.....100%		FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes					Template/Prelogin
Packed on Ice N <input checked="" type="checkbox"/> Y		<input type="checkbox"/> Two Day50%						Shipped Via:	
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	TYPH (GRD+DRO) PFEX (8260) S10C		Remarks/Contaminant	Sample # (lab only)
SB 1-11 (Blankenship 4-8)(2-4)	Grab	SS	2-4	09.08.11	10:10	1 X			(SSS44U-01
SB 2-11 (Blankenship 4-8)(2-3)		1	2-3	09.08.11	09:17	1 X			02
SB 3-11 (Blankenship 4-8)(2-4)		1	2-4	09.08.11	08:45	1 X			03
SB 4-11 (Blankenship 4-8)(2-4)		1	2-4	09.08.11	08:30	1 X			04
SB 5-11 (Blankenship 4-8)(0-1)		1	0-1	09.08.11	09:09	1 X			05
SB 6-11 (Blankenship 4-8)(2-4)	↓	↓	2-4	09.08.11	09:50	1 X			06
SB 6-11 (Blankenship 4-8)(8-12)		1	8-12	09.08.11	00:45	1 X			07
SB 7-11 (Blankenship 4-8)(6-8)		1	6-8	09.08.11	10:40	1 X			08
SB 3-11 (Blankenship 4-8)(8-10)	↓	↓	8-10	09.08.11	10:50	1 X			09

*Matrix: **SS** - Soil/Solid **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other

pH Temp

Remarks

Flow _____ Other _____

Relinquished by: (Signature) <i>John Banchild</i>	Date: 9-9-11	Time: 1700	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only) <i>OK</i>		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 37	Bottles Received: 9-102		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9-10-11	Time: 1136	pH Checked:	NCF:



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Mr. Dustin Krajewski
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Fort Collins, CO 80525

Report Summary

Tuesday September 20, 2011

Report Number: L535457

Samples Received: 09/10/11

Client Project: 60196941

Description: EnCana Pavillion

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

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Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

September 20, 2011

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1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-1-11 BF-4-8
Collected By : D. Fairchild
Collection Date : 09/08/11 16:45

ESC Sample # : L535457-01

Site ID : PAVILLION
Project # : 60196941

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	0.24	0.10	mg/l	GRO	09/13/11	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.2		% Rec.	GRO	09/13/11	1
Volatile Organics						
Benzene	BDL	0.0010	mg/l	8260B	09/11/11	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/11/11	1
Toluene	BDL	0.0050	mg/l	8260B	09/11/11	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/11/11	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	09/11/11	1
Dibromofluoromethane	104.		% Rec.	8260B	09/11/11	1
4-Bromofluorobenzene	95.3		% Rec.	8260B	09/11/11	1
DRO Wyoming C10-C32						
TPH (GC/FID) High Fraction	0.69	0.10	mg/l	8015	09/14/11	1
Surrogate recovery(%) o-Terphenyl	101.		% Rec.	8015	09/14/11	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270C	09/15/11	1
Acenaphthylene	BDL	0.0010	mg/l	8270C	09/15/11	1
Anthracene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzidine	BDL	0.010	mg/l	8270C	09/15/11	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270C	09/15/11	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270C	09/15/11	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270C	09/15/11	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270C	09/15/11	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270C	09/15/11	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270C	09/15/11	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270C	09/15/11	1
Chrysene	BDL	0.0010	mg/l	8270C	09/15/11	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270C	09/15/11	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270C	09/15/11	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270C	09/15/11	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270C	09/15/11	1
Fluoranthene	BDL	0.0010	mg/l	8270C	09/15/11	1
Fluorene	BDL	0.0010	mg/l	8270C	09/15/11	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270C	09/15/11	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270C	09/15/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)



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Est. 1970

REPORT OF ANALYSIS

September 20, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-1-11 BF-4-8
Collected By : D. Fairchild
Collection Date : 09/08/11 16:45

ESC Sample # : L535457-01

Site ID : PAVILLION

Project # : 60196941

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270C	09/15/11	1
Hexachloroethane	BDL	0.010	mg/l	8270C	09/15/11	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270C	09/15/11	1
Isophorone	BDL	0.010	mg/l	8270C	09/15/11	1
Naphthalene	BDL	0.0010	mg/l	8270C	09/15/11	1
Nitrobenzene	BDL	0.010	mg/l	8270C	09/15/11	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270C	09/15/11	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270C	09/15/11	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270C	09/15/11	1
Phenanthrene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzylbutyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Bis(2-ethylhexyl)phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Di-n-butyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Diethyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Dimethyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Di-n-octyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Pyrene	BDL	0.0010	mg/l	8270C	09/15/11	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270C	09/15/11	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270C	09/15/11	1
2-Chlorophenol	BDL	0.010	mg/l	8270C	09/15/11	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270C	09/15/11	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270C	09/15/11	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270C	09/15/11	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270C	09/15/11	1
2-Nitrophenol	BDL	0.010	mg/l	8270C	09/15/11	1
4-Nitrophenol	BDL	0.010	mg/l	8270C	09/15/11	1
Pentachlorophenol	BDL	0.010	mg/l	8270C	09/15/11	1
Phenol	BDL	0.010	mg/l	8270C	09/15/11	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270C	09/15/11	1
Surrogate Recovery						
2-Fluorophenol	40.2	% Rec.	8270C	09/15/11	1	
Phenol-d5	28.6	% Rec.	8270C	09/15/11	1	
Nitrobenzene-d5	65.0	% Rec.	8270C	09/15/11	1	
2-Fluorobiphenyl	74.9	% Rec.	8270C	09/15/11	1	
2,4,6-Tribromophenol	96.4	% Rec.	8270C	09/15/11	1	
p-Terphenyl-d14	86.4	% Rec.	8270C	09/15/11	1	

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/19/11 17:43 Revised: 09/20/11 08:04



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 20, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-3-11 BF-4-8
Collected By : D. Fairchild
Collection Date : 09/08/11 16:35

ESC Sample # : L535457-02
Site ID : PAVILLION
Project # : 60196941

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	5.2	1.0	mg/l	GRO	09/13/11	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.0		% Rec.	GRO	09/13/11	10
Volatile Organics						
Benzene	0.11	0.010	mg/l	8260B	09/13/11	10
Ethylbenzene	0.24	0.010	mg/l	8260B	09/13/11	10
Toluene	0.25	0.050	mg/l	8260B	09/13/11	10
Xylenes, Total	1.2	0.030	mg/l	8260B	09/13/11	10
Surrogate Recovery						
Toluene-d8	106.		% Rec.	8260B	09/13/11	10
Dibromofluoromethane	101.		% Rec.	8260B	09/13/11	10
4-Bromofluorobenzene	125.		% Rec.	8260B	09/13/11	10
DRO Wyoming C10-C32						
TPH (GC/FID) High Fraction	13.	0.50	mg/l	8015	09/15/11	5
Surrogate recovery(%) o-Terphenyl	130.		% Rec.	8015	09/15/11	5
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270C	09/15/11	1
Acenaphthylene	BDL	0.0010	mg/l	8270C	09/15/11	1
Anthracene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzidine	BDL	0.010	mg/l	8270C	09/15/11	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270C	09/15/11	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270C	09/15/11	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270C	09/15/11	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270C	09/15/11	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270C	09/15/11	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270C	09/15/11	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270C	09/15/11	1
Chrysene	BDL	0.0010	mg/l	8270C	09/15/11	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270C	09/15/11	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270C	09/15/11	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270C	09/15/11	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270C	09/15/11	1
Fluoranthene	BDL	0.0010	mg/l	8270C	09/15/11	1
Fluorene	BDL	0.0010	mg/l	8270C	09/15/11	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270C	09/15/11	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270C	09/15/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

September 20, 2011

Mr. Dustin Krajewski
AECOM Inc. - Fort Collins, CO
1601 Prospect Parkway
Fort Collins, CO 80525

Date Received : September 10, 2011
Description : EnCana Pavillion
Sample ID : SB-3-11 BF-4-8
Collected By : D. Fairchild
Collection Date : 09/08/11 16:35

ESC Sample # : L535457-02

Site ID : PAVILLION
Project # : 60196941

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270C	09/15/11	1
Hexachloroethane	BDL	0.010	mg/l	8270C	09/15/11	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270C	09/15/11	1
Isophorone	BDL	0.010	mg/l	8270C	09/15/11	1
Naphthalene	0.072	0.0050	mg/l	8270C	09/16/11	5
Nitrobenzene	BDL	0.010	mg/l	8270C	09/15/11	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270C	09/15/11	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270C	09/15/11	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270C	09/15/11	1
Phenanthrene	BDL	0.0010	mg/l	8270C	09/15/11	1
Benzylbutyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Bis(2-ethylhexyl)phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Di-n-butyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Diethyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Dimethyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Di-n-octyl phthalate	BDL	0.0010	mg/l	8270C	09/15/11	1
Pyrene	BDL	0.0010	mg/l	8270C	09/15/11	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270C	09/15/11	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270C	09/15/11	1
2-Chlorophenol	BDL	0.010	mg/l	8270C	09/15/11	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270C	09/15/11	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270C	09/15/11	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270C	09/15/11	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270C	09/15/11	1
2-Nitrophenol	BDL	0.010	mg/l	8270C	09/15/11	1
4-Nitrophenol	BDL	0.010	mg/l	8270C	09/15/11	1
Pentachlorophenol	BDL	0.010	mg/l	8270C	09/15/11	1
Phenol	BDL	0.010	mg/l	8270C	09/15/11	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270C	09/15/11	1
Surrogate Recovery						
2-Fluorophenol	34.1	% Rec.	8270C	09/15/11	1	
Phenol-d5	27.2	% Rec.	8270C	09/15/11	1	
Nitrobenzene-d5	77.2	% Rec.	8270C	09/15/11	1	
2-Fluorobiphenyl	47.1	% Rec.	8270C	09/15/11	1	
2,4,6-Tribromophenol	70.9	% Rec.	8270C	09/15/11	1	
p-Terphenyl-d14	50.7	% Rec.	8270C	09/15/11	1	

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 09/19/11 17:43 Revised: 09/20/11 08:04

Page 5 of 28

EPAPAV0047630

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L535457-01	WG555187	SAMP	2-Chlorophenol	R1860474	J3
	WG555187	SAMP	Pentachlorophenol	R1860474	J3
L535457-02	WG555187	SAMP	2-Chlorophenol	R1860474	J3
	WG555187	SAMP	Pentachlorophenol	R1860474	J3
L535457-03	WG555187	SAMP	Xylenes, Total	R1856715	J6
	WG555187	SAMP	2-Chlorophenol	R1860474	J3
L535457-04	WG555187	SAMP	Pentachlorophenol	R1860474	J3
	WG555187	SAMP	4-Chloro-3-methylphenol	R1860474	L2
	WG555187	SAMP	2-Chlorophenol	R1860474	J3L2
	WG555187	SAMP	2,4-Dichlorophenol	R1860474	L2
	WG555187	SAMP	2,4-Dimethylphenol	R1860474	L2
	WG555187	SAMP	4,6-Dinitro-2-methylphenol	R1860474	L2
	WG555187	SAMP	2,4-Dinitrophenol	R1860474	L2
	WG555187	SAMP	2-Nitrophenol	R1860474	L2
	WG555187	SAMP	4-Nitrophenol	R1860474	L2
	WG555187	SAMP	Pentachlorophenol	R1860474	J3L2
	WG555187	SAMP	Phenol	R1860474	L2
	WG555187	SAMP	2,4,6-Trichlorophenol	R1860474	L2
	WG555187	SAMP	2-Fluorophenol	R1860474	J2
	WG555187	SAMP	Phenol-d5	R1860474	J2
	WG555187	SAMP	2,4,6-Tribromophenol	R1860474	J2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
L2	(ESC) The associated surrogate compound falls below 10%. The data should be used with caution. A re-extraction was not possible due to limited sample volume.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
09/20/11 at 08:05:01

TSR Signing Reports: 044
R5 - Desired TAT

Always run BTEX by 8260 unless noted otherwise. In 9/2/11

Sample: L535457-01 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 17:43

Sample: L535457-02 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 17:43

Sample: L535457-03 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 17:43

Sample: L535457-04 Account: ENSRFCCO Received: 09/10/11 11:30 Due Date: 09/16/11 00:00 RPT Date: 09/19/11 17:43



L A B S C I E N C E S

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Est. 1970

Quality Assurance Report
Level II

L535457

September 20, 2011

Analyte	Result	Laboratory Blank Units	% Rec	Limit	Batch	Date Analyzed
1,1,1,2-Tetrachloroethane	<.001	mg/l			WG554557	09/10/11 22:37
1,1,1-Trichloroethane	<.001	mg/l			WG554557	09/10/11 22:37
1,1,2,2-Tetrachloroethane	<.001	mg/l			WG554557	09/10/11 22:37
1,1,2-Trichloroethane	<.001	mg/l			WG554557	09/10/11 22:37
1,1,2,2-Trifluoroethane	<.001	mg/l			WG554557	09/10/11 22:37
1,1-Dichloroethane	<.001	mg/l			WG554557	09/10/11 22:37
1,1-Dichloroethene	<.001	mg/l			WG554557	09/10/11 22:37
1,1-Dichloropropene	<.001	mg/l			WG554557	09/10/11 22:37
1,2,3-Trichlorobenzene	<.001	mg/l			WG554557	09/10/11 22:37
1,2,3-Trichloropropane	<.001	mg/l			WG554557	09/10/11 22:37
1,2,3-Trimethylbenzene	<.001	mg/l			WG554557	09/10/11 22:37
1,2,4-Trimethylbenzene	<.001	mg/l			WG554557	09/10/11 22:37
1,2-Dibromo-3-Chloropropane	<.005	mg/l			WG554557	09/10/11 22:37
1,2-Dibromoethane	<.001	mg/l			WG554557	09/10/11 22:37
1,2-Dichlorobenzene	<.001	mg/l			WG554557	09/10/11 22:37
1,2-Dichloroethane	<.001	mg/l			WG554557	09/10/11 22:37
1,2-Dichloropropane	<.001	mg/l			WG554557	09/10/11 22:37
1,3,5-Trimethylbenzene	<.001	mg/l			WG554557	09/10/11 22:37
1,3-Dichlorobenzene	<.001	mg/l			WG554557	09/10/11 22:37
1,3-Dichloropropane	<.001	mg/l			WG554557	09/10/11 22:37
1,4-Dichlorobenzene	<.001	mg/l			WG554557	09/10/11 22:37
2,2-Dichloropropane	<.001	mg/l			WG554557	09/10/11 22:37
2-Butanone (MEK)	<.01	mg/l			WG554557	09/10/11 22:37
2-Chloroethyl vinyl ether	<.05	mg/l			WG554557	09/10/11 22:37
2-Chlorotoluene	<.001	mg/l			WG554557	09/10/11 22:37
4-Chlorotoluene	<.001	mg/l			WG554557	09/10/11 22:37
4-Methyl-2-pentaanone (MIBK)	<.01	mg/l			WG554557	09/10/11 22:37
Acetone	<.05	mg/l			WG554557	09/10/11 22:37
Acrolein	<.025	mg/l			WG554557	09/10/11 22:37
Acrylonitrile	<.01	mg/l			WG554557	09/10/11 22:37
Benzene	<.001	mg/l			WG554557	09/10/11 22:37
Bromobenzene	<.001	mg/l			WG554557	09/10/11 22:37
Bromodichloromethane	<.001	mg/l			WG554557	09/10/11 22:37
Bromoform	<.001	mg/l			WG554557	09/10/11 22:37
Bromomethane	<.005	mg/l			WG554557	09/10/11 22:37
Carbon tetrachloride	<.001	mg/l			WG554557	09/10/11 22:37
Chlorobenzene	<.001	mg/l			WG554557	09/10/11 22:37
Chlorodibromomethane	<.001	mg/l			WG554557	09/10/11 22:37
Chloroethane	<.005	mg/l			WG554557	09/10/11 22:37
Chloroform	<.005	mg/l			WG554557	09/10/11 22:37
Chloromethane	<.0025	mg/l			WG554557	09/10/11 22:37
cis-1,2-Dichloroethene	<.001	mg/l			WG554557	09/10/11 22:37
cis-1,3-Dichloropropene	<.001	mg/l			WG554557	09/10/11 22:37
Di-isopropyl ether	<.001	mg/l			WG554557	09/10/11 22:37
Dibromomethane	<.001	mg/l			WG554557	09/10/11 22:37
Dichlorodifluoromethane	<.005	mg/l			WG554557	09/10/11 22:37
Ethylbenzene	<.001	mg/l			WG554557	09/10/11 22:37
Hexachloro-1,3-butadiene	<.001	mg/l			WG554557	09/10/11 22:37
Isopropylbenzene	<.001	mg/l			WG554557	09/10/11 22:37
Methyl tert-butyl ether	<.001	mg/l			WG554557	09/10/11 22:37
Methylene Chloride	<.005	mg/l			WG554557	09/10/11 22:37
n-Butylbenzene	<.001	mg/l			WG554557	09/10/11 22:37
n-Propylbenzene	<.001	mg/l			WG554557	09/10/11 22:37
Naphthalene	<.005	mg/l			WG554557	09/10/11 22:37
p-Isopropyltoluene	<.001	mg/l			WG554557	09/10/11 22:37
sec-Butylbenzene	<.001	mg/l			WG554557	09/10/11 22:37
Styrene	<.001	mg/l			WG554557	09/10/11 22:37
tert-Butylbenzene	<.001	mg/l			WG554557	09/10/11 22:37

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L A B S C I E N C E S

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Est. 1970

Quality Assurance Report
Level II

L535457

September 20, 2011

Analyte	Result	Laboratory Blank Units	% Rec	Limit	Batch	Date Analyzed
Tetrachloroethene	<.001	mg/l			WG554557	09/10/11 22:37
Toluene	<.005	mg/l			WG554557	09/10/11 22:37
trans-1,2-Dichloroethene	<.001	mg/l			WG554557	09/10/11 22:37
trans-1,3-Dichloropropene	<.001	mg/l			WG554557	09/10/11 22:37
Trichloroethene	<.001	mg/l			WG554557	09/10/11 22:37
Trichlorofluoromethane	<.005	mg/l			WG554557	09/10/11 22:37
Vinyl chloride	<.001	mg/l			WG554557	09/10/11 22:37
Xylenes, Total	<.003	mg/l			WG554557	09/10/11 22:37
4-Bromofluorobenzene		% Rec.	95.98	82-120	WG554557	09/10/11 22:37
Dibromofluoromethane		% Rec.	105.5	82-126	WG554557	09/10/11 22:37
Toluene-d8		% Rec.	101.3	92-112	WG554557	09/10/11 22:37
TPH (GC/FID) Low Fraction	<.1	mg/l			WG554885	09/13/11 16:03
a,a,a-Trifluorotoluene(FID)		% Rec.	97.29	62-128	WG554885	09/13/11 16:03
1,1,1,2-Tetrachloroethane	<.001	mg/l			WG554911	09/13/11 12:58
1,1,1-Trichloroethane	<.001	mg/l			WG554911	09/13/11 12:58
1,1,2,2-Tetrachloroethane	<.001	mg/l			WG554911	09/13/11 12:58
1,1,2-Trichloroethane	<.001	mg/l			WG554911	09/13/11 12:58
1,1,2-Trichloro-1,2,2-trifluoroethane	<.001	mg/l			WG554911	09/13/11 12:58
1,1-Dichloroethane	<.001	mg/l			WG554911	09/13/11 12:58
1,1-Dichloroethene	<.001	mg/l			WG554911	09/13/11 12:58
1,1-Dichloropropene	<.001	mg/l			WG554911	09/13/11 12:58
1,2,3-Trichlorobenzene	<.001	mg/l			WG554911	09/13/11 12:58
1,2,3-Trimethylbenzene	<.001	mg/l			WG554911	09/13/11 12:58
1,2,4-Trichlorobenzene	<.001	mg/l			WG554911	09/13/11 12:58
1,2,4-Trimethylbenzene	<.001	mg/l			WG554911	09/13/11 12:58
1,2-Dibromo-3-Chloropropane	<.005	mg/l			WG554911	09/13/11 12:58
1,2-Dibromoethane	<.001	mg/l			WG554911	09/13/11 12:58
1,2-Dichlorobenzene	<.001	mg/l			WG554911	09/13/11 12:58
1,2-Dichloroethane	<.001	mg/l			WG554911	09/13/11 12:58
1,2-Dichloropropane	<.001	mg/l			WG554911	09/13/11 12:58
1,3,5-Trimethylbenzene	<.001	mg/l			WG554911	09/13/11 12:58
1,3-Dichlorobenzene	<.001	mg/l			WG554911	09/13/11 12:58
1,3-Dichloropropene	<.001	mg/l			WG554911	09/13/11 12:58
1,4-Dichlorobenzene	<.001	mg/l			WG554911	09/13/11 12:58
2,2-Dichloropropane	<.001	mg/l			WG554911	09/13/11 12:58
2-Butanone (MEK)	<.01	mg/l			WG554911	09/13/11 12:58
2-Chloroethyl vinyl ether	<.05	mg/l			WG554911	09/13/11 12:58
2-Chlorotoluene	<.001	mg/l			WG554911	09/13/11 12:58
4-Chlorotoluene	<.001	mg/l			WG554911	09/13/11 12:58
4-Methyl-2-pentanone (MIBK)	<.01	mg/l			WG554911	09/13/11 12:58
Acetone	<.05	mg/l			WG554911	09/13/11 12:58
Acrolein	<.025	mg/l			WG554911	09/13/11 12:58
Acrylonitrile	<.01	mg/l			WG554911	09/13/11 12:58
Benzene	<.001	mg/l			WG554911	09/13/11 12:58
Bromobenzene	<.001	mg/l			WG554911	09/13/11 12:58
Bromodichloromethane	<.001	mg/l			WG554911	09/13/11 12:58
Bromoform	<.001	mg/l			WG554911	09/13/11 12:58
Bromomethane	<.005	mg/l			WG554911	09/13/11 12:58
Carbon tetrachloride	<.001	mg/l			WG554911	09/13/11 12:58
Chlorobenzene	<.001	mg/l			WG554911	09/13/11 12:58
Chlorodibromomethane	<.001	mg/l			WG554911	09/13/11 12:58
Chloroethane	<.005	mg/l			WG554911	09/13/11 12:58
Chloroform	<.005	mg/l			WG554911	09/13/11 12:58
Chloromethane	<.0025	mg/l			WG554911	09/13/11 12:58

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Level II

L535457

September 20, 2011

Analyte	Result	Laboratory Blank Units	% Rec	Limit	Batch	Date Analyzed
cis-1,2-Dichloroethene	< .001	mg/l			WG554911	09/13/11 12:58
cis-1,3-Dichloropropene	< .001	mg/l			WG554911	09/13/11 12:58
Di-isopropyl ether	< .001	mg/l			WG554911	09/13/11 12:58
Dibromomethane	< .001	mg/l			WG554911	09/13/11 12:58
Dichlorodifluoromethane	< .005	mg/l			WG554911	09/13/11 12:58
Ethylbenzene	< .001	mg/l			WG554911	09/13/11 12:58
Hexachloro-1,3-butadiene	< .001	mg/l			WG554911	09/13/11 12:58
Isopropylbenzene	< .001	mg/l			WG554911	09/13/11 12:58
Methyl tert-butyl ether	< .001	mg/l			WG554911	09/13/11 12:58
Methylene Chloride	< .005	mg/l			WG554911	09/13/11 12:58
n-Butylbenzene	< .001	mg/l			WG554911	09/13/11 12:58
n-Propylbenzene	< .001	mg/l			WG554911	09/13/11 12:58
Naphthalene	< .005	mg/l			WG554911	09/13/11 12:58
p-Isopropyltoluene	< .001	mg/l			WG554911	09/13/11 12:58
sec-Butylbenzene	< .001	mg/l			WG554911	09/13/11 12:58
Styrene	< .001	mg/l			WG554911	09/13/11 12:58
tert-Butylbenzene	< .001	mg/l			WG554911	09/13/11 12:58
Tetrachloroethene	< .001	mg/l			WG554911	09/13/11 12:58
Toluene	< .005	mg/l			WG554911	09/13/11 12:58
trans-1,2-Dichloroethene	< .001	mg/l			WG554911	09/13/11 12:58
trans-1,3-Dichloropropene	< .001	mg/l			WG554911	09/13/11 12:58
Trichloroethene	< .001	mg/l			WG554911	09/13/11 12:58
Trichlorofluoromethane	< .005	mg/l			WG554911	09/13/11 12:58
Vinyl chloride	< .001	mg/l			WG554911	09/13/11 12:58
Xylenes, Total	< .003	mg/l			WG554911	09/13/11 12:58
4-Bromofluorobenzene	% Rec.	114.6		82-120	WG554911	09/13/11 12:58
Dibromofluoromethane	% Rec.	103.9		82-126	WG554911	09/13/11 12:58
Toluene-d8	% Rec.	103.5		92-112	WG554911	09/13/11 12:58
TPH (GC/FID) High Fraction	< .1	ppm			WG554605	09/14/11 19:49
o-Terphenyl		% Rec.	102.8	50-150	WG554605	09/14/11 19:49
1,2,4-Trichlorobenzene	< .01	mg/l			WG555187	09/15/11 12:53
2,4,6-Trichlorophenol	< .01	mg/l			WG555187	09/15/11 12:53
2,4-Dichlorophenol	< .01	mg/l			WG555187	09/15/11 12:53
2,4-Dimethylphenol	< .01	mg/l			WG555187	09/15/11 12:53
2,4-Dinitrophenol	< .01	mg/l			WG555187	09/15/11 12:53
2,4-Dinitrotoluene	< .01	mg/l			WG555187	09/15/11 12:53
2,6-Dinitrotoluene	< .01	mg/l			WG555187	09/15/11 12:53
2-Chloronaphthalene	< .001	mg/l			WG555187	09/15/11 12:53
2-Chlorophenol	< .01	mg/l			WG555187	09/15/11 12:53
2-Nitrophenol	< .01	mg/l			WG555187	09/15/11 12:53
3,3-Dichlorobenzidine	< .01	mg/l			WG555187	09/15/11 12:53
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG555187	09/15/11 12:53
4-Bromophenyl-phenylether	< .01	mg/l			WG555187	09/15/11 12:53
4-Chloro-3-methylphenol	< .01	mg/l			WG555187	09/15/11 12:53
4-Chlorophenyl-phenylether	< .01	mg/l			WG555187	09/15/11 12:53
4-Nitrophenol	< .01	mg/l			WG555187	09/15/11 12:53
Acenaphthene	< .001	mg/l			WG555187	09/15/11 12:53
Acenaphthylene	< .001	mg/l			WG555187	09/15/11 12:53
Anthracene	< .001	mg/l			WG555187	09/15/11 12:53
Benzidine	< .01	mg/l			WG555187	09/15/11 12:53
Benzo(a)anthracene	< .001	mg/l			WG555187	09/15/11 12:53
Benzo(a)pyrene	< .001	mg/l			WG555187	09/15/11 12:53
Benzo(b)fluoranthene	< .001	mg/l			WG555187	09/15/11 12:53
Benzo(g,h,i)perylene	< .001	mg/l			WG555187	09/15/11 12:53
Benzo(k)fluoranthene	< .001	mg/l			WG555187	09/15/11 12:53

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Level II

L535457

September 20, 2011

Analyte	Result	Laboratory Blank Units	% Rec	Limit	Batch	Date Analyzed
Benzylbutyl phthalate	<.001	mg/l			WG555187	09/15/11 12:53
Bis(2-chlorethoxy)methane	<.01	mg/l			WG555187	09/15/11 12:53
Bis(2-chloroethyl)ether	<.01	mg/l			WG555187	09/15/11 12:53
Bis(2-chloroisopropyl)ether	<.01	mg/l			WG555187	09/15/11 12:53
Bis(2-ethylhexyl)phthalate	<.001	mg/l			WG555187	09/15/11 12:53
Chrysene	<.001	mg/l			WG555187	09/15/11 12:53
Di-n-butyl phthalate	<.001	mg/l			WG555187	09/15/11 12:53
Di-n-octyl phthalate	<.001	mg/l			WG555187	09/15/11 12:53
Dibenz(a,h)anthracene	<.001	mg/l			WG555187	09/15/11 12:53
Diethyl phthalate	<.001	mg/l			WG555187	09/15/11 12:53
Dimethyl phthalate	<.001	mg/l			WG555187	09/15/11 12:53
Fluoranthene	<.001	mg/l			WG555187	09/15/11 12:53
Fluorene	<.001	mg/l			WG555187	09/15/11 12:53
Hexachloro-1,3-butadiene	<.01	mg/l			WG555187	09/15/11 12:53
Hexachlorobenzene	<.001	mg/l			WG555187	09/15/11 12:53
Hexachlorocyclopentadiene	<.01	mg/l			WG555187	09/15/11 12:53
Hexachloroethane	<.01	mg/l			WG555187	09/15/11 12:53
Indeno(1,2,3-cd)pyrene	<.001	mg/l			WG555187	09/15/11 12:53
Isophorone	<.01	mg/l			WG555187	09/15/11 12:53
n-Nitrosodi-n-propylamine	<.01	mg/l			WG555187	09/15/11 12:53
n-Nitrosodimethylamine	<.01	mg/l			WG555187	09/15/11 12:53
n-Nitrosodiphenylamine	<.01	mg/l			WG555187	09/15/11 12:53
Naphthalene	<.001	mg/l			WG555187	09/15/11 12:53
Nitrobenzene	<.01	mg/l			WG555107	09/15/11 12:53
Pentachlorophenol	<.001	mg/l			WG555187	09/15/11 12:53
Phenanthrene	<.001	mg/l			WG555187	09/15/11 12:53
Phenol	<.01	mg/l			WG555187	09/15/11 12:53
Pyrene	<.001	mg/l			WG555187	09/15/11 12:53
2,4,6-Tribromophenol		mg/l	74.01	16-147	WG555187	09/15/11 12:53
2-Fluorobiphenyl		mg/l	73.01	29-127	WG555187	09/15/11 12:53
2-Fluorophenol		mg/l	41.76	10-75	WG555187	09/15/11 12:53
Nitrobenzene-d5		mg/l	63.41	17-119	WG555187	09/15/11 12:53
Phenol-d5		mg/l	29.89	10-63	WG555187	09/15/11 12:53
p-Terphenyl-d14		mg/l	98.42	40-174	WG555187	09/15/11 12:53

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0259	104.	77-128	WG554557
1,1,1-Trichloroethane	mg/l	.025	0.0264	106.	71-126	WG554557
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0279	112.	78-130	WG554557
1,1,2-Trichloroethane	mg/l	.025	0.0267	107.	81-121	WG554557
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.025	0.0237	94.9	53-143	WG554557
1,1-Dichloroethane	mg/l	.025	0.0285	114.	73-123	WG554557
1,1-Dichloroethene	mg/l	.025	0.0244	97.8	54-134	WG554557
1,1-Dichloropropene	mg/l	.025	0.0280	112.	67-127	WG554557
1,2,3-Trichlorobenzene	mg/l	.025	0.0282	113.	77-130	WG554557
1,2,2-Trichloropropane	mg/l	.025	0.0283	113.	68-130	WG554557
1,2,3-Trimethylbenzene	mg/l	.025	0.0269	108.	70-127	WG554557
1,2,4-Trichlorobenzene	mg/l	.025	0.0283	113.	76-127	WG554557
1,2,4-Trimethylbenzene	mg/l	.025	0.0272	109.	77-129	WG554557
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0246	98.6	55-142	WG554557
1,2-Dibromoethane	mg/l	.025	0.0266	107.	78-124	WG554557
1,2-Dichlorobenzene	mg/l	.025	0.0279	112.	82-121	WG554557
1,2-Dichloroethane	mg/l	.025	0.0288	115.	69-128	WG554557
1,2-Dichloropropane	mg/l	.025	0.0265	106.	77-121	WG554557
1,3,5-Trimethylbenzene	mg/l	.025	0.0270	108.	78-127	WG554557
1,3-Dichlorobenzene	mg/l	.025	0.0271	108.	77-127	WG554557
1,3-Dichloropropane	mg/l	.025	0.0267	107.	78-117	WG554557

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Level II

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
1,4-Dichlorobenzene	mg/l	.025	0.0273	109.	79-117	WG554557
2,2-Dichloropropane	mg/l	.025	0.0242	96.9	63-130	WG554557
2-Butanone (MEK)	mg/l	.125	0.137	110.	58-144	WG554557
2-Chloroethyl vinyl ether	mg/l	.125	0.145	116.	26-172	WG554557
2-Chlorotoluene	mg/l	.025	0.0267	107.	78-123	WG554557
4-Chlorotoluene	mg/l	.025	0.0269	108.	78-122	WG554557
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.131	105.	58-147	WG554557
Acetone	mg/l	.125	0.110	88.4	49-153	WG554557
Acrolein	mg/l	.125	0.0961	76.9	10-181	WG554557
Acrylonitrile	mg/l	.125	0.154	123.	53-153	WG554557
Benzene	mg/l	.025	0.0274	109.	72-119	WG554557
Bromobenzene	mg/l	.025	0.0276	110.	76-121	WG554557
Bromodichloromethane	mg/l	.025	0.0259	104.	75-127	WG554557
Bromoform	mg/l	.025	0.0249	99.5	61-136	WG554557
Bromomethane	mg/l	.025	0.0391	156.	42-172	WG554557
Carbon tetrachloride	mg/l	.025	0.0243	97.4	63-129	WG554557
Chlorobenzene	mg/l	.025	0.0263	105.	78-123	WG554557
Chlorodibromomethane	mg/l	.025	0.0259	104.	73-128	WG554557
Chloroethane	mg/l	.025	0.0402	161.	52-164	WG554557
Chloroform	mg/l	.025	0.0286	114.	76-122	WG554557
Chloromethane	mg/l	.025	0.0302	121.	50-141	WG554557
cis-1,2-Dichloroethene	mg/l	.025	0.0282	113.	75-121	WG554557
cis-1,3-Dichloropropene	mg/l	.025	0.0252	101.	74-124	WG554557
Di-isopropyl ether	mg/l	.025	0.0273	109.	66-129	WG554557
Dibromomethane	mg/l	.025	0.0267	107.	77-124	WG554557
Dichlorodifluoromethane	mg/l	.025	0.0273	109.	33-173	WG554557
Ethylbenzene	mg/l	.025	0.0259	104.	77-124	WG554557
Hexachloro-1,3-butadiene	mg/l	.025	0.0289	116.	71-134	WG554557
Isopropylbenzene	mg/l	.025	0.0262	105.	74-126	WG554557
Methyl tert-butyl ether	mg/l	.025	0.0279	112.	67-127	WG554557
Methylene Chloride	mg/l	.025	0.0190	76.1	67-122	WG554557
n-Butylbenzene	mg/l	.025	0.0283	113.	74-130	WG554557
n-Propylbenzene	mg/l	.025	0.0275	110.	77-125	WG554557
Naphthalene	mg/l	.025	0.0285	114.	70-134	WG554557
p-Isopropyltoluene	mg/l	.025	0.0271	108.	77-132	WG554557
sec-Butylbenzene	mg/l	.025	0.0265	106.	77-130	WG554557
Styrene	mg/l	.025	0.0275	110.	69-145	WG554557
tert-Butylbenzene	mg/l	.025	0.0261	104.	76-131	WG554557
Tetrachloroethene	mg/l	.025	0.0265	106.	75-121	WG554557
Toluene	mg/l	.025	0.0248	99.0	75-114	WG554557
trans-1,2-Dichloroethene	mg/l	.025	0.0276	111.	63-127	WG554557
trans-1,3-Dichloropropene	mg/l	.025	0.0260	104.	69-124	WG554557
Trichloroethene	mg/l	.025	0.0267	107.	69-131	WG554557
Trichlorofluoromethane	mg/l	.025	0.0364	146.	53-161	WG554557
Vinyl chloride	mg/l	.025	0.0309	123.	55-142	WG554557
Xylenes, Total	mg/l	.075	0.0773	103.	77-123	WG554557
4-Bromofluorobenzene				98.82	82-120	WG554557
Dibromofluoromethane				110.4	82-126	WG554557
Toluene-d8				99.01	92-112	WG554557
TPH (GC/FID) Low Fraction	mg/l	5.5	6.39	116.	70-124	WG554885
a,a,a-Trifluorotoluene(FID)				113.5	62-128	WG554885
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0273	109.	77-128	WG554911
1,1,1-Trichloroethane	mg/l	.025	0.0267	107.	71-126	WG554911
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0228	91.1	78-130	WG554911
1,1,2-Trichloroethane	mg/l	.025	0.0240	96.0	81-121	WG554911

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Est. 1970

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 Level II

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September 20, 2011

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.025	0.0240	95.8	53-143	WG554911
1,1-Dichloroethane	mg/l	.025	0.0245	97.8	73-123	WG554911
1,1-Dichloroethene	mg/l	.025	0.0210	84.1	54-134	WG554911
1,1-Dichloropropene	mg/l	.025	0.0233	93.1	67-127	WG554911
1,2,3-Trichlorobenzene	mg/l	.025	0.0256	102.	77-130	WG554911
1,2,3-Trichloropropane	mg/l	.025	0.0251	100.	68-130	WG554911
1,2,3-Trimethylbenzene	mg/l	.025	0.0236	94.5	70-127	WG554911
1,2,4-Trichlorobenzene	mg/l	.025	0.0270	108.	76-127	WG554911
1,2,4-Trimethylbenzene	mg/l	.025	0.0263	105.	77-129	WG554911
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0220	88.0	55-142	WG554911
1,2-Dibromoethane	mg/l	.025	0.0242	96.7	78-124	WG554911
1,2-Dichlorobenzene	mg/l	.025	0.0242	96.9	82-121	WG554911
1,2-Dichloroethane	mg/l	.025	0.0246	98.3	69-128	WG554911
1,2-Dichloropropene	mg/l	.025	0.0229	91.7	77-121	WG554911
1,3,5-Trimethylbenzene	mg/l	.025	0.0271	108.	78-127	WG554911
1,3-Dichlorobenzene	mg/l	.025	0.0256	102.	77-127	WG554911
1,3-Dichloropropane	mg/l	.025	0.0230	91.8	78-117	WG554911
1,4-Dichlorobenzene	mg/l	.025	0.0237	94.9	79-117	WG554911
2,2-Dichloropropane	mg/l	.025	0.0277	111.	63-130	WG554911
2-Butanone (MEK)	mg/l	.125	0.101	80.6	58-144	WG554911
2-Chloroethyl vinyl ether	mg/l	.125	0.101	80.9	26-172	WG554911
2-Chlorotoluene	mg/l	.025	0.0261	104.	78-123	WG554911
4-Chlorotoluene	mg/l	.025	0.0257	103.	78-122	WG554911
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.114	91.0	58-147	WG554911
Acetone	mg/l	.125	0.0966	77.3	49-153	WG554911
Acrolein	mg/l	.125	0.0179	14.3	10-181	WG554911
Acrylonitrile	mg/l	.125	0.105	84.4	53-153	WG554911
Benzene	mg/l	.025	0.0227	90.8	72-119	WG554911
Bromobenzene	mg/l	.025	0.0257	103.	76-121	WG554911
Bromodichloromethane	mg/l	.025	0.0261	104.	75-127	WG554911
Bromoform	mg/l	.025	0.0238	95.3	61-136	WG554911
Bromomethane	mg/l	.025	0.0260	104.	42-172	WG554911
Carbon tetrachloride	mg/l	.025	0.0265	106.	63-129	WG554911
Chlorobenzene	mg/l	.025	0.0246	98.3	78-123	WG554911
Chlorodibromomethane	mg/l	.025	0.0281	112.	73-128	WG554911
Chloroethane	mg/l	.025	0.0230	92.1	52-164	WG554911
Chloroform	mg/l	.025	0.0259	104.	76-122	WG554911
Chloromethane	mg/l	.025	0.0183	73.2	50-141	WG554911
cis-1,2-Dichloroethene	mg/l	.025	0.0241	96.2	75-121	WG554911
cis-1,3-Dichloropropene	mg/l	.025	0.0251	100.	74-124	WG554911
Di-isopropyl ether	mg/l	.025	0.0233	93.3	66-129	WG554911
Dibromomethane	mg/l	.025	0.0243	97.4	77-124	WG554911
Dichlorodifluoromethane	mg/l	.025	0.0213	85.1	33-173	WG554911
Ethylbenzene	mg/l	.025	0.0251	100.	77-124	WG554911
Hexachloro-1,3-butadiene	mg/l	.025	0.0251	100.	71-134	WG554911
Isopropylbenzene	mg/l	.025	0.0293	117.	74-126	WG554911
Methyl tert-butyl ether	mg/l	.025	0.0269	108.	67-127	WG554911
Methylene Chloride	mg/l	.025	0.0248	99.2	67-122	WG554911
n-Butylbenzene	mg/l	.025	0.0246	98.4	74-130	WG554911
n-Propylbenzene	mg/l	.025	0.0248	99.2	77-125	WG554911
Naphthalene	mg/l	.025	0.0223	89.4	70-134	WG554911
p-Isopropyltoluene	mg/l	.025	0.0278	111.	77-132	WG554911
sec-Butylbenzene	mg/l	.025	0.0264	106.	77-130	WG554911
Styrene	mg/l	.025	0.0180	71.9	69-145	WG554911
tct-Butylbenzene	mg/l	.025	0.0281	112.	76-131	WG554911
Tetrachloroethene	mg/l	.025	0.0239	95.8	75-121	WG554911
Toluene	mg/l	.025	0.0236	94.3	75-114	WG554911
trans-1,2-Dichloroethene	mg/l	.025	0.0237	94.7	63-127	WG554911
trans-1,3-Dichloropropene	mg/l	.025	0.0239	95.6	69-124	WG554911

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Trichloroethene	mg/l	.025	0.0241	96.3	69-131	WG554911
Trichlorofluoromethane	mg/l	.025	0.0249	99.5	53-161	WG554911
Vinyl chloride	mg/l	.025	0.0195	78.1	55-142	WG554911
Xylenes, Total	mg/l	.075	0.0772	103.	77-123	WG554911
4-Bromofluorobenzene				110.3	82-120	WG554911
Dibromofluoromethane				103.2	82-126	WG554911
Toluene-d8				105.0	92-112	WG554911
1,2,4-Trichlorobenzene	mg/l	.01	0.00602	60.2	34-97	WG555187
2,4,6-Trichlorophenol	mg/l	.01	0.00659	65.9	38-113	WG555187
2,4-Dichlorophenol	mg/l	.01	0.00673	67.3	46-105	WG555187
2,4-Dimethylphenol	mg/l	.01	0.00675	67.5	47-108	WG555187
2,4-Dinitrophenol	mg/l	.01	0.00564	56.4	10-121	WG555187
2,4-Dinitrotoluene	mg/l	.01	0.00841	84.1	59-117	WG555187
2,6-Dinitrotoluene	mg/l	.01	0.00751	75.1	57-110	WG555187
2-Chloronaphthalene	mg/l	.01	0.00708	70.8	47-106	WG555187
2-Chlorophenol	mg/l	.01	0.00678	67.8	37-90	WG555187
2-Nitrophenol	mg/l	.01	0.00660	66.0	40-112	WG555187
3,3-Dichlorobenzidine	mg/l	.01	0.00637	63.7	58-116	WG555187
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00756	75.6	21-119	WG555187
4-Bromophenyl-phenylether	mg/l	.01	0.00741	74.1	63-120	WG555187
4-Chloro-3-methylphenol	mg/l	.01	0.00652	65.2	50-105	WG555187
4-Chlorophenyl-phenylether	mg/l	.01	0.00703	70.3	58-115	WG555187
4-Nitrophenol	mg/l	.01	0.00273	27.3	10-53	WG555187
Acenaphthene	mg/l	.01	0.00728	72.8	52-107	WG555187
Acenaphthylene	mg/l	.01	0.00773	77.3	55-119	WG555187
Anthracene	mg/l	.01	0.00822	82.2	65-114	WG555187
Benzidine	mg/l	.01	0.00191	19.1	10-55	WG555187
Benzo(a)anthracene	mg/l	.01	0.00867	86.7	68-113	WG555187
Benzo(a)pyrene	mg/l	.01	0.00784	78.4	68-115	WG555187
Benzo(b)fluoranthene	mg/l	.01	0.00766	76.6	67-114	WG555187
Benzo(g,h,i)perylene	mg/l	.01	0.00885	88.5	52-132	WG555187
Benzo(k)fluoranthene	mg/l	.01	0.00845	84.5	62-116	WG555187
Benzylbutyl phthalate	mg/l	.01	0.00778	77.8	12-166	WG555187
Bis(2-chlorethoxy)methane	mg/l	.01	0.00673	67.3	56-116	WG555187
Bis(2-chloroethyl)ether	mg/l	.01	0.00656	65.6	39-109	WG555187
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00658	65.8	43-108	WG555187
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00935	93.5	61-147	WG555187
Chrysene	mg/l	.01	0.00819	81.9	65-114	WG555187
Di-n-butyl phthalate	mg/l	.01	0.00807	80.7	56-133	WG555187
Di-n-octyl phthalate	mg/l	.01	0.00923	92.3	59-143	WG555187
Dibenz(a,h)anthracene	mg/l	.01	0.00825	82.5	54-130	WG555187
Diethyl phthalate	mg/l	.01	0.00748	74.8	33-136	WG555187
Dimethyl phthalate	mg/l	.01	0.00567	56.7	10-152	WG555187
Fluoranthene	mg/l	.01	0.00851	85.1	66-120	WG555187
Fluorene	mg/l	.01	0.00704	70.4	58-110	WG555187
Hexachloro-1,3-butadiene	mg/l	.01	0.00706	70.6	34-115	WG555187
Hexachlorobenzene	mg/l	.01	0.00680	68.0	55-117	WG555187
Hexachlorocyclopentadiene	mg/l	.01	0.00940	94.0	20-121	WG555187
Hexachloroethane	mg/l	.01	0.00665	66.5	24-93	WG555187
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00832	83.2	56-129	WG555187
Isophorone	mg/l	.01	0.00587	58.7	55-108	WG555187
n-Nitrosodi-n-propylamine	mg/l	.01	0.00753	75.3	50-115	WG555187
n-Nitrosodimethylamine	mg/l	.01	0.00449	44.9	12-68	WG555187
n-Nitrosodiphenylamine	mg/l	.01	0.00747	74.7	55-98	WG555187
Naphthalene	mg/l	.01	0.00641	64.1	42-103	WG555187
Nitrobenzene	mg/l	.01	0.00663	66.3	39-102	WG555187
Pentachlorophenol	mg/l	.01	0.00581	58.1	10-101	WG555187

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Analyte	Units	Laboratory Known Val	Control Sample Result	% Rec	Limit	Batch
Phenanthrene	mg/l	.01	0.00777	77.7	61-110	WG555187
Phenol	mg/l	.01	0.00266	26.6	10-53	WG555187
Pyrene	mg/l	.01	0.00825	82.5	65-116	WG555187
2,4,6-Tribromophenol	mg/l			75.86	16-147	WG555187
2-Fluorobiphenyl	mg/l			71.71	29-127	WG555187
2-Fluorophenol	mg/l			38.39	10-75	WG555187
Nitrobenzene-d5	mg/l			63.33	17-119	WG555187
Phenol-d5	mg/l			30.06	10-63	WG555187
p-Terphenyl-d14	mg/l			85.31	40-174	WG555187

Analyte	Units	Laboratory Result	Control Ref	Sample %Rec	Duplicate Limit	RPD	Limit	Batch
1,1,1,2-Tetrachloroethane	mg/l	0.0237	0.0259	95.0	77-128	9.00	20	WG554557
1,1,1-Trichloroethane	mg/l	0.0252	0.0264	101.	71-126	4.73	20	WG554557
1,1,2,2-Tetrachloroethane	mg/l	0.0248	0.0279	99.0	78-130	11.7	20	WG554557
1,1,2-Trichloroethane	mg/l	0.0249	0.0267	100.	81-121	6.97	20	WG554557
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0202	0.0237	81.0	53-143	16.2	20	WG554557
1,1-Dichloroethane	mg/l	0.0258	0.0285	103.	73-123	9.91	20	WG554557
1,1-Dichloroethene	mg/l	0.0210	0.0244	84.0	54-134	15.2	20	WG554557
1,1-Dichloropropene	mg/l	0.0255	0.0280	102.	67-127	9.06	20	WG554557
1,2,2-Trichlorobenzene	mg/l	0.0266	0.0282	106.	77-130	5.78	20	WG554557
1,2,3-Trichloropropane	mg/l	0.0261	0.0283	104.	68-130	7.93	20	WG554557
1,2,3-Trimethylbenzene	mg/l	0.0253	0.0269	101.	70-127	6.34	20	WG554557
1,2,4-Trichlorobenzene	mg/l	0.0262	0.0283	105.	76-127	7.64	20	WG554557
1,2,4-Trimethylbenzene	mg/l	0.0243	0.0272	97.0	77-129	11.3	20	WG554557
1,2-Dibromo-3-Chloropropane	mg/l	0.0221	0.0246	88.0	55-142	10.9	20	WG554557
1,2-Dibromoethane	mg/l	0.0249	0.0266	100.	78-124	6.59	20	WG554557
1,2-Dichlorobenzene	mg/l	0.0261	0.0279	104.	82-121	6.66	20	WG554557
1,2-Dichloroethane	mg/l	0.0270	0.0288	108.	69-128	6.53	20	WG554557
1,2-Dichloropropane	mg/l	0.0254	0.0265	101.	77-121	4.52	20	WG554557
1,3,5-Trimethylbenzene	mg/l	0.0242	0.0270	97.0	78-127	11.2	20	WG554557
1,3-Dichlorobenzene	mg/l	0.0237	0.0271	95.0	77-127	13.4	20	WG554557
1,3-Dichloropropane	mg/l	0.0249	0.0267	99.0	78-117	7.27	20	WG554557
1,4-Dichlorobenzene	mg/l	0.0256	0.0273	102.	79-117	6.44	20	WG554557
2,2-Dichloropropane	mg/l	0.0229	0.0242	91.0	63-130	5.76	20	WG554557
2-Butanone (MEK)	mg/l	0.127	0.137	101.	58-144	7.93	20	WG554557
2-Chloroethyl vinyl ether	mg/l	0.148	0.145	118.	26-172	2.03	22	WG554557
2-Chlorotoluene	mg/l	0.0239	0.0267	96.0	78-123	11.2	20	WG554557
4-Chlorotoluene	mg/l	0.0240	0.0269	96.0	78-122	11.5	20	WG554557
4-Methyl-2-pentanone (MIBK)	mg/l	0.129	0.131	103.	58-147	1.31	20	WG554557
Acetone	mg/l	0.125	0.110	100.	49-153	12.0	21	WG554557
Acrolein	mg/l	0.122	0.0961	97.0	10-181	23.6	30	WG554557
Acrylonitrile	mg/l	0.137	0.154	109.	53-153	12.0	20	WG554557
Benzene	mg/l	0.0252	0.0274	101.	72-119	8.19	20	WG554557
Bromobenzene	mg/l	0.0244	0.0276	98.0	76-121	12.4	20	WG554557
Bromodichloromethane	mg/l	0.0247	0.0259	99.0	75-127	4.74	20	WG554557
Bromoform	mg/l	0.0221	0.0249	88.0	61-136	11.7	20	WG554557
Bromomethane	mg/l	0.0345	0.0391	138.	42-172	12.5	20	WG554557
Carbon tetrachloride	mg/l	0.0234	0.0243	94.0	63-129	3.92	20	WG554557
Chlorobenzene	mg/l	0.0247	0.0263	99.0	78-123	6.46	20	WG554557
Chlorodibromomethane	mg/l	0.0240	0.0259	96.0	73-128	7.75	20	WG554557
Chloroethane	mg/l	0.0334	0.0402	134.	52-164	18.5	20	WG554557
Chloroform	mg/l	0.0266	0.0286	106.	76-122	7.28	20	WG554557
Chloromethane	mg/l	0.0263	0.0302	105.	50-141	13.8	20	WG554557
cis-1,2-Dichloroethene	mg/l	0.0260	0.0282	104.	75-121	8.23	20	WG554557
cis-1,3-Dichloropropene	mg/l	0.0249	0.0252	100.	74-124	1.29	20	WG554557
Di-isopropyl ether	mg/l	0.0253	0.0273	101.	66-129	7.41	20	WG554557
Dibromomethane	mg/l	0.0253	0.0267	101.	77-124	5.36	20	WG554557

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report
Level II

L535457

September 20, 2011

Analyte	Units	Laboratory Result	Control Ref	%Rec	Sample	Duplicate	Limit	RPD	Limit	Batch
Dichlorodifluoromethane	mg/l	0.0237	0.0273	95.0	33-173	14.1	20		WG554557	
Ethylbenzene	mg/l	0.0236	0.0259	94.0	77-124	9.08	20		WG554557	
Hexachloro-1,3-butadiene	mg/l	0.0266	0.0289	106.	71-134	8.30	20		WG554557	
Isopropylbenzene	mg/l	0.0237	0.0262	95.0	74-126	10.0	20		WG554557	
Methyl tert-butyl ether	mg/l	0.0250	0.0279	100.	67-127	11.1	20		WG554557	
Methylene Chloride	mg/l	0.0257	0.0190	103.	67-122	30.0*	20		WG554557	
n-Butylbenzene	mg/l	0.0262	0.0283	105.	74-130	7.73	20		WG554557	
n-Propylbenzene	mg/l	0.0241	0.0275	96.0	77-125	13.1	20		WG554557	
Naphthalene	mg/l	0.0264	0.0285	106.	70-134	7.74	20		WG554557	
p-Isopropyltoluene	mg/l	0.0239	0.0271	95.0	77-132	12.7	20		WG554557	
sec-Butylbenzene	mg/l	0.0234	0.0265	94.0	77-130	12.7	20		WG554557	
Styrene	mg/l	0.0247	0.0275	99.0	69-145	10.8	20		WG554557	
tert-Butylbenzene	mg/l	0.0238	0.0261	95.0	76-131	9.02	20		WG554557	
Tetrachloroethene	mg/l	0.0238	0.0265	95.0	75-121	10.6	20		WG554557	
Toluene	mg/l	0.0245	0.0248	98.0	75-114	0.890	20		WG554557	
trans-1,2-Dichloroethene	mg/l	0.0247	0.0276	99.0	63-127	11.4	20		WG554557	
trans-1,3-Dichloropropene	mg/l	0.0260	0.0260	104.	69-124	0.200	20		WG554557	
Trichloroethene	mg/l	0.0247	0.0267	99.0	69-131	7.98	20		WG554557	
Trichlorofluoromethane	mg/l	0.0311	0.0364	124.	53-161	15.6	20		WG554557	
Vinyl chloride	mg/l	0.0260	0.0309	104.	55-142	17.1	20		WG554557	
Xylenes, Total	mg/l	0.0712	0.0773	95.0	77-123	8.17	20		WG554557	
4-Bromofluorobenzene				94.74	82-120				WG554557	
Dibromofluoromethane				108.3	82-126				WG554557	
Toluene-d8				103.9	92-112				WG554557	
TPH (GC/FID) Low Fraction	mg/l	5.82	6.39	106.	70-124	9.42	20		WG554885	
a,a,a-Trifluorotoluene (PID)				105.4	62-128				WG554885	
1,1,1,2-Tetrachloroethane	mg/l	0.0265	0.0273	106.	77-128	2.68	20		WG554911	
1,1,1-Trichloroethane	mg/l	0.0263	0.0267	105.	71-126	1.40	20		WG554911	
1,1,2,2-Tetrachloroethane	mg/l	0.0232	0.0228	93.0	78-130	2.10	20		WG554911	
1,1,2-Trichloroethane	mg/l	0.0245	0.0240	98.0	81-121	2.00	20		WG554911	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0259	0.0240	104.	53-143	7.88	20		WG554911	
1,1-Dichloroethane	mg/l	0.0240	0.0245	96.0	73-123	1.98	20		WG554911	
1,1-Dichloroethene	mg/l	0.0260	0.0210	104.	54-134	21.1*	20		WG554911	
1,1-Dichloropropene	mg/l	0.0232	0.0233	93.0	67-127	0.220	20		WG554911	
1,2,3-Trichlorobenzene	mg/l	0.0246	0.0256	98.0	77-130	4.05	20		WG554911	
1,2,3-Trichloropropane	mg/l	0.0258	0.0251	103.	68-130	2.77	20		WG554911	
1,2,3-Trimethylbenzene	mg/l	0.0233	0.0236	93.0	70-127	1.45	20		WG554911	
1,2,4-Trichlorobenzene	mg/l	0.0258	0.0270	103.	76-127	4.45	20		WG554911	
1,2,4-Trimethylbenzene	mg/l	0.0256	0.0263	102.	77-129	2.64	20		WG554911	
1,2-Dibromo-3-Chloropropane	mg/l	0.0223	0.0220	89.0	55-142	1.56	20		WG554911	
1,2-Dibromoethane	mg/l	0.0256	0.0242	102.	78-124	5.79	20		WG554911	
1,2-Dichlorobenzene	mg/l	0.0238	0.0242	95.0	82-121	1.63	20		WG554911	
1,2-Dichloroethane	mg/l	0.0249	0.0246	100.	69-128	1.24	20		WG554911	
1,2-Dichloropropane	mg/l	0.0228	0.0229	91.0	77-121	0.600	20		WG554911	
1,3,5-Trimethylbenzene	mg/l	0.0269	0.0271	107.	78-127	0.940	20		WG554911	
1,3-Dichlorobenzene	mg/l	0.0250	0.0256	100.	77-127	2.31	20		WG554911	
1,3-Dichloropropane	mg/l	0.0238	0.0230	95.0	78-117	3.66	20		WG554911	
1,4-Dichlorobenzene	mg/l	0.0238	0.0237	95.0	79-117	0.300	20		WG554911	
2,2-Dichloropropane	mg/l	0.0267	0.0277	107.	63-130	3.57	20		WG554911	
2-Butanone (MEK)	mg/l	0.111	0.101	89.0	58-144	10.0	20		WG554911	
2-Chloroethyl vinyl ether	mg/l	0.112	0.101	90.0	26-172	10.3	22		WG554911	
2-Chlorotoluene	mg/l	0.0252	0.0261	101.	78-123	3.21	20		WG554911	
4-Chlorotoluene	mg/l	0.0256	0.0257	102.	78-122	0.490	20		WG554911	
4-Methyl-2-pentanone (MIBK)	mg/l	0.121	0.114	97.0	58-147	6.48	20		WG554911	
Acetone	mg/l	0.103	0.0966	82.0	49-153	6.34	21		WG554911	

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Quality Assurance Report
 Level II

L535457

September 20, 2011

Analyte	Units	Laboratory Result	Control Ref	%Rec	Sample	Duplicate	Limit	RPD	Limit	Batch
Acrolein	mg/l	0.0190	0.0179	15.0			10-181	5.86	30	WG554911
Acrylonitrile	mg/l	0.109	0.105	87.0			53-153	3.44	20	WG554911
Benzene	mg/l	0.0228	0.0227	91.0			72-119	0.230	20	WG554911
Bromobenzene	mg/l	0.0255	0.0257	102.			76-121	0.740	20	WG554911
Bromodichloromethane	mg/l	0.0259	0.0261	104.			75-127	0.620	20	WG554911
Bromoform	mg/l	0.0242	0.0238	97.0			61-136	1.57	20	WG554911
Bromomethane	mg/l	0.0249	0.0260	100.			42-172	4.22	20	WG554911
Carbon tetrachloride	mg/l	0.0261	0.0265	104.			63-129	1.62	20	WG554911
Chlorobenzene	mg/l	0.0245	0.0246	98.0			78-123	0.320	20	WG554911
Chlorodibromomethane	mg/l	0.0283	0.0281	113.			73-128	0.780	20	WG554911
Chloroethane	mg/l	0.0223	0.0230	89.0			52-164	3.18	20	WG554911
Chloroform	mg/l	0.0254	0.0259	102.			76-122	1.95	20	WG554911
Chloromethane	mg/l	0.0171	0.0183	68.0			50-141	7.00	20	WG554911
cis-1,2-Dichloroethene	mg/l	0.0238	0.0241	95.0			75-121	1.17	20	WG554911
cis-1,3-Dichloropropene	mg/l	0.0257	0.0251	103.			74-124	2.61	20	WG554911
Di-isopropyl ether	mg/l	0.0227	0.0233	91.0			66-129	2.63	20	WG554911
Dibromomethane	mg/l	0.0248	0.0243	99.0			77-124	1.71	20	WG554911
Dichlorodifluoromethane	mg/l	0.0213	0.0213	85.0			33-173	0.0200	20	WG554911
Ethylbenzene	mg/l	0.0251	0.0251	100.			77-124	0.180	20	WG554911
Hexachloro-1,3-butadiene	mg/l	0.0252	0.0251	101.			71-134	0.250	20	WG554911
Isopropylbenzene	mg/l	0.0291	0.0293	116.			74-126	0.550	20	WG554911
Methyl tert-butyl ether	mg/l	0.0269	0.0269	108.			67-127	0.150	20	WG554911
Methylene Chloride	mg/l	0.0239	0.0248	95.0			67-122	3.85	20	WG554911
n-Butylbenzene	mg/l	0.0248	0.0246	99.0			74-130	0.900	20	WG554911
n-Propylbenzene	mg/l	0.0247	0.0248	99.0			77-125	0.410	20	WG554911
Naphthalene	mg/l	0.0218	0.0223	87.0			70-134	2.67	20	WG554911
p-Isopropyltoluene	mg/l	0.0280	0.0278	112.			77-132	0.830	20	WG554911
sec-Butylbenzene	mg/l	0.0267	0.0264	107.			77-130	0.910	20	WG554911
Styrene	mg/l	0.0180	0.0180	72.0			69-145	0.0100	20	WG554911
tert-Butylbenzene	mg/l	0.0279	0.0281	112.			76-131	0.690	20	WG554911
Tetrachloroethene	mg/l	0.0239	0.0239	95.0			75-121	0.380	20	WG554911
Toluene	mg/l	0.0239	0.0236	95.0			75-114	1.18	20	WG554911
trans-1,2-Dichloroethene	mg/l	0.0229	0.0237	92.0			63-127	3.33	20	WG554911
trans-1,3-Dichloropropene	mg/l	0.0253	0.0239	101.			69-124	5.92	20	WG554911
Trichloroethene	mg/l	0.0241	0.0241	96.0			69-131	0.280	20	WG554911
Trichlorofluoromethane	mg/l	0.0237	0.0249	95.0			53-161	4.98	20	WG554911
Vinyl chloride	mg/l	0.0190	0.0195	76.0			55-142	2.51	20	WG554911
Xylenes, Total	mg/l	0.0760	0.0772	101.			77-123	1.61	20	WG554911
4-Bromofluorobenzene				110.4			82-120			WG554911
Dibromofluoromethane				101.2			82-126			WG554911
Toluene-d8				103.7			92-112			WG554911
1,2,4-Trichlorobenzene	mg/l	0.00635	0.00602	64.0			34-97	5.36	21	WG55187
2,4,6-Trichlorophenol	mg/l	0.00565	0.00659	56.0			38-113	15.5	29	WG55187
2,4-Dichlorophenol	mg/l	0.00665	0.00673	66.0			46-105	1.18	20	WG55187
2,4-Dimethylphenol	mg/l	0.00673	0.00675	67.0			47-108	0.217	20	WG55187
2,4-Dinitrophenol	mg/l	0.00411	0.00564	41.0			10-121	31.4	40	WG55187
2,4-Dinitrotoluene	mg/l	0.00793	0.00841	79.0			59-117	5.81	20	WG55187
2,6-Dinitrotoluene	mg/l	0.00784	0.00751	78.0			57-110	4.33	20	WG55187
2-Chloronaphthalene	mg/l	0.00714	0.00708	71.0			47-106	0.782	20	WG55187
2-Chlorophenol	mg/l	0.00536	0.00678	54.0			37-90	23.5*	21	WG55187
2-Nitrophenol	mg/l	0.00641	0.00660	64.0			40-112	2.98	22	WG55187
3,3-Dichlorobenzidine	mg/l	0.00626	0.00637	63.0			58-116	1.68	20	WG55187
4,6-Dinitro-2-methylphenol	mg/l	0.00582	0.00756	58.0			21-119	26.0	40	WG55187
4-Bromophenyl-phenylether	mg/l	0.00779	0.00741	78.0			63-120	5.06	20	WG55187
4-Chloro-3-methylphenol	mg/l	0.00728	0.00652	73.0			50-105	11.0	20	WG55187
4-Chlorophenyl-phenylether	mg/l	0.00729	0.00703	73.0			58-115	3.64	20	WG55187
4-Nitrophenol	mg/l	0.00251	0.00273	25.0			10-53	8.26	40	WG55187

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Level II

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September 20, 2011

Analyte	Units	Laboratory Result	Control Ref	%Rec	Sample Limit	Duplicate RPD	Limit	Batch
Acenaphthene	mg/l	0.00768	0.00728	77.0	52-107	5.34	20	WG555187
Acenaphthylene	mg/l	0.00797	0.00773	80.0	55-119	3.09	20	WG555187
Anthracene	mg/l	0.00811	0.00822	81.0	65-114	1.34	20	WG555187
Benzidine	mg/l	0.00202	0.00191	20.0	10-55	5.66	40	WG555187
Benzo(a)anthracene	mg/l	0.00848	0.00867	85.0	68-113	2.24	20	WG555187
Benzo(a)pyrene	mg/l	0.00840	0.00784	84.0	68-115	6.91	20	WG555187
Benzo(b)fluoranthene	mg/l	0.00833	0.00766	83.0	67-114	8.41	20	WG555187
Benzo(g,h,i)perylene	mg/l	0.00936	0.00885	94.0	52-132	5.57	20	WG555187
Benzo(k)fluoranthene	mg/l	0.00860	0.00845	86.0	62-116	1.74	20	WG555187
Benzylbutyl phthalate	mg/l	0.00749	0.00778	75.0	12-166	3.81	20	WG555187
Bis(2-chloroethoxy)methane	mg/l	0.00756	0.00673	76.0	56-116	11.7	20	WG555187
Bis(2-chloroethyl)ether	mg/l	0.00704	0.00656	70.0	39-109	7.12	23	WG555187
Bis(2-chloroisopropyl)ether	mg/l	0.00692	0.00658	69.0	43-108	5.04	20	WG555187
Bis(2-ethylhexyl)phthalate	mg/l	0.00928	0.00935	93.0	61-147	0.783	20	WG555187
Chrysene	mg/l	0.00863	0.00819	86.0	65-114	5.15	20	WG555187
Di-n-butyl phthalate	mg/l	0.00810	0.00807	81.0	56-133	0.412	20	WG555187
Di-n-octyl phthalate	mg/l	0.00929	0.00923	93.0	59-143	0.678	20	WG555187
Dibenz(a,h)anthracene	mg/l	0.00864	0.00825	86.0	54-130	4.59	20	WG555187
Diethyl phthalate	mg/l	0.00725	0.00748	72.0	33-136	3.11	20	WG555187
Dimethyl phthalate	mg/l	0.00516	0.00567	52.0	10-152	9.40	22	WG555187
Fluoranthene	mg/l	0.00856	0.00851	86.0	66-120	0.503	20	WG555187
Fluorene	mg/l	0.00734	0.00704	73.0	58-110	4.19	20	WG555187
Hexachloro-1,3-butadiene	mg/l	0.00725	0.00706	72.0	34-115	2.55	22	WG555187
Hexachlorobenzene	mg/l	0.00696	0.00680	70.0	55-117	2.25	20	WG555187
Hexachlorocyclopentadiene	mg/l	0.00932	0.00940	93.0	20-121	0.827	27	WG555187
Hexachloroethane	mg/l	0.00648	0.00665	65.0	24-93	2.57	25	WG555187
Indeno(1,2,3-cd)pyrene	mg/l	0.00870	0.00832	87.0	56-129	4.55	20	WG555187
Isophorone	mg/l	0.00638	0.00587	64.0	55-108	8.27	20	WG555187
n-Nitrosodi-n-propylamine	mg/l	0.00768	0.00753	77.0	50-115	1.93	20	WG555187
n-Nitrosodimethylamine	mg/l	0.00441	0.00449	44.0	12-68	1.69	31	WG555187
n-Nitrosodiphenylamine	mg/l	0.00749	0.00747	75.0	55-98	0.247	20	WG555187
Naphthalene	mg/l	0.00672	0.00641	67.0	42-103	4.78	20	WG555187
Nitrobenzene	mg/l	0.00729	0.00663	73.0	39-102	9.59	20	WG555187
Pentachlorophenol	mg/l	0.00382	0.00581	38.0	10-101	41.3*	40	WG555187
Phenanthrone	mg/l	0.00806	0.00777	80.0	61-110	3.67	20	WG555187
Phenol	mg/l	0.00249	0.00266	25.0	10-53	6.62	20	WG555187
Pyrene	mg/l	0.00824	0.00825	82.0	65-116	0.0787	20	WG555187
2,4,6-Tribromophenol				68.05	16-147			WG555187
2-Fluorobiphenyl				71.08	29-127			WG555187
2-Fluorophenol				34.21	10-75			WG555187
Nitrobenzene-d5				63.72	17-119			WG555187
Phenol-d5				26.47	10-63			WG555187
p-Terphenyl-d14				75.37	40-174			WG555187

Analyte	Units	Matrix MS Res	Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,1,2-Tetrachloroethane	mg/l	0.0243	0	.025	97.0	71-130	L535449-14	WG554557
1,1,1-Trichloroethane	mg/l	0.0236	0	.025	94.5	58-137	L535449-14	WG554557
1,1,2,2-Tetrachloroethane	mg/l	0.0269	0	.025	108.	64-149	L535449-14	WG554557
1,1,2-Trichloroethane	mg/l	0.0254	0	.025	101.	73-128	L535449-14	WG554557
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0193	0	.025	77.2	36-159	L535449-14	WG554557
1,1-Dichloroethane	mg/l	0.0246	0	.025	98.3	58-133	L535449-14	WG554557
1,1-Dichloroethene	mg/l	0.0193	0	.025	77.0	32-152	L535449-14	WG554557
1,1-Dichloropropene	mg/l	0.0236	0	.025	94.3	50-140	L535449-14	WG554557
1,2,3-Trichlorobenzene	mg/l	0.0268	0	.025	107.	68-135	L535449-14	WG554557
1,2,3-Trichloropropane	mg/l	0.0272	0	.025	109.	74-137	L535449-14	WG554557
1,2,3-Trimethylbenzene	mg/l	0.0256	0	.025	102.	67-133	L535449-14	WG554557
1,2,4-Trichlorobenzene	mg/l	0.0281	0	.025	112.	67-133	L535449-14	WG554557

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Analyte	Units	Matrix	Spike	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,2,4-Trimethylbenzene	mg/l	0.0255	0	.025	102.		62-141	L535449-14	WG554557	
1,2-Dibromo-3-Chloropropane	mg/l	0.0230	0	.025	92.0		55-148	L535449-14	WG554557	
1,2-Dibromethane	mg/l	0.0250	0	.025	100.		71-129	L535449-14	WG554557	
1,2-Dichlorobenzene	mg/l	0.0268	0	.025	107.		75-125	L535449-14	WG554557	
1,2-Dichloroethane	mg/l	0.0258	0	.025	103.		59-135	L535449-14	WG554557	
1,2-Dichloropropane	mg/l	0.0241	0	.025	96.2		68-126	L535449-14	WG554557	
1,3,5-Trimethylbenzene	mg/l	0.0247	0	.025	98.7		67-136	L535449-14	WG554557	
1,3-Dichlorobenzene	mg/l	0.0254	0	.025	101.		69-131	L535449-14	WG554557	
1,3-Dichloropropane	mg/l	0.0248	0	.025	99.3		70-122	L535449-14	WG554557	
1,4-Dichlorobenzene	mg/l	0.0260	0	.025	104.		70-123	L535449-14	WG554557	
2,2-Dichloropropane	mg/l	0.0212	0	.025	85.0		51-141	L535449-14	WG554557	
2-Butanone (MEK)	mg/l	0.122	0	.125	97.8		51-149	L535449-14	WG554557	
2-Chloroethyl vinyl ether	mg/l	0.00603	0	.125	4.83*		10-161	L535449-14	WG554557	
2-Chlorotoluene	mg/l	0.0248	0	.025	99.0		65-133	L535449-14	WG554557	
4-Chlorotoluene	mg/l	0.0257	0	.025	103.		67-129	L535449-14	WG554557	
4-Methyl-2-pentanone (MIBK)	mg/l	0.124	0	.125	99.0		53-154	L535449-14	WG554557	
Acetone	mg/l	0.0903	0	.125	72.2		34-146	L535449-14	WG554557	
Acrolein	mg/l	0.0901	0	.125	72.1		10-189	L535449-14	WG554557	
Acrylonitrile	mg/l	0.141	0	.125	113.		49-162	L535449-14	WG554557	
Benzene	mg/l	0.0236	0	.025	94.4		51-134	L535449-14	WG554557	
Bromobenzene	mg/l	0.0255	0	.025	102.		64-130	L535449-14	WG554557	
Bromodichloromethane	mg/l	0.0240	0	.025	96.1		67-132	L535449-14	WG554557	
Bromoform	mg/l	0.0230	0	.025	92.1		59-137	L535449-14	WG554557	
Bromomethane	mg/l	0.0300	0	.025	120.		23-177	L535449-14	WG554557	
Carbon tetrachloride	mg/l	0.0207	0	.025	82.7		49-140	L535449-14	WG554557	
Chlorobenzene	mg/l	0.0246	0	.025	98.5		69-126	L535449-14	WG554557	
Chlorodibromomethane	mg/l	0.0246	0	.025	98.5		68-130	L535449-14	WG554557	
Chloroethane	mg/l	0.0326	0	.025	130.		32-177	L535449-14	WG554557	
Chloroform	mg/l	0.0260	0	.025	104.		64-130	L535449-14	WG554557	
Chloromethane	mg/l	0.0221	0	.025	88.3		27-155	L535449-14	WG554557	
cis-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9		54-137	L535449-14	WG554557	
cis-1,3-Dichloropropene	mg/l	0.0246	0	.025	98.2		63-127	L535449-14	WG554557	
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9		58-133	L535449-14	WG554557	
Dibromomethane	mg/l	0.0242	0	.025	96.6		68-131	L535449-14	WG554557	
Dichlorodifluoromethane	mg/l	0.0211	0	.025	84.6		16-188	L535449-14	WG554557	
Ethylbenzene	mg/l	0.0238	0	.025	95.4		64-135	L535449-14	WG554557	
Hexachloro-1,3-butadiene	mg/l	0.0274	0	.025	110.		64-140	L535449-14	WG554557	
Isopropylbenzene	mg/l	0.0245	0	.025	98.2		62-134	L535449-14	WG554557	
Methyl tert-butyl ether	mg/l	0.0250	0	.025	100.		55-136	L535449-14	WG554557	
Methylene Chloride	mg/l	0.0167	0	.025	66.9		52-130	L535449-14	WG554557	
n-Butylbenzene	mg/l	0.0271	0	.025	108.		62-142	L535449-14	WG554557	
n-Propylbenzene	mg/l	0.0254	0	.025	102.		62-137	L535449-14	WG554557	
Naphthalene	mg/l	0.0270	0	.025	108.		65-140	L535449-14	WG554557	
p-Isopropyltoluene	mg/l	0.0252	0	.025	101.		64-142	L535449-14	WG554557	
sec-Butylbenzene	mg/l	0.0245	0	.025	98.0		67-139	L535449-14	WG554557	
Styrene	mg/l	0.0256	0	.025	102.		58-152	L535449-14	WG554557	
tert-Butylbenzene	mg/l	0.0244	0	.025	97.6		66-139	L535449-14	WG554557	
Tetrachloroethene	mg/l	0.0237	0	.025	94.9		56-139	L535449-14	WG554557	
Toluene	mg/l	0.0227	0	.025	90.6		61-126	L535449-14	WG554557	
trans-1,2-Dichloroethene	mg/l	0.0220	0	.025	88.1		45-137	L535449-14	WG554557	
trans-1,3-Dichloropropene	mg/l	0.0246	0	.025	98.3		59-130	L535449-14	WG554557	
Trichloroethene	mg/l	0.0229	0	.025	91.4		40-155	L535449-14	WG554557	
Trichlorofluoromethane	mg/l	0.0311	0	.025	124.		35-177	L535449-14	WG554557	
Vinyl chloride	mg/l	0.0245	0	.025	97.9		32-159	L535449-14	WG554557	
Xylenes, Total	mg/l	0.0719	0	.075	95.9		64-133	L535449-14	WG554557	
4-Bromofluorobenzene					99.08		82-120			
Dibromofluoromethane					108.7		82-126			
Toluene-d8					102.0		92-112		WG554557	

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Est. 1970

Quality Assurance Report
Level II

L535457

September 20, 2011

Analyte	Units	Matrix	Spike	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
TPH (GC/FID) Low Fraction	mg/l	5.67	0	5.5	103.	55-109	L535576-03	WG554885		
a,a,a-Trifluorotoluene(FID)					103.4	62-128		WG554885		
1,1,1,2-Tetrachloroethane	mg/l	0.282	0	.025	113.	71-130	L535457-02	WG554911		
1,1,1-Trichloroethane	mg/l	0.277	0	.025	111.	58-137	L535457-02	WG554911		
1,1,2,2-Tetrachloroethane	mg/l	0.282	0	.025	113.	64-149	L535457-02	WG554911		
1,1,2-Trichloroethane	mg/l	0.277	0	.025	111.	73-128	L535457-02	WG554911		
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.227	0	.025	90.9	36-159	L535457-02	WG554911		
1,1-Dichloroethane	mg/l	0.241	0	.025	96.3	58-133	L535457-02	WG554911		
1,1-Dichloroethene	mg/l	0.195	0	.025	77.9	32-152	L535457-02	WG554911		
1,1-Dichloropropene	mg/l	0.260	0	.025	104.	50-140	L535457-02	WG554911		
1,2,3-Trichlorobenzene	mg/l	0.244	0	.025	97.7	68-135	L535457-02	WG554911		
1,2,3-Trichloropropane	mg/l	0.283	0	.025	113.	74-137	L535457-02	WG554911		
1,2,3-Trimethylbenzene	mg/l	0.387	0.260	.025	50.9*	67-133	L535457-02	WG554911		
1,2,4-Trichlorobenzene	mg/l	0.254	0	.025	102.	67-133	L535457-02	WG554911		
1,2,4-Trimethylbenzene	mg/l	0.621	0.700	.025	0*	62-141	L535457-02	WG554911		
1,2-Dibromo-3-Chloropropane	mg/l	0.245	0	.025	98.2	55-148	L535457-02	WG554911		
1,2-Dibromoethane	mg/l	0.270	0	.025	108.	71-129	L535457-02	WG554911		
1,2-Dichlorobenzene	mg/l	0.248	0	.025	99.0	75-125	L535457-02	WG554911		
1,2-Dichloroethane	mg/l	0.267	0	.025	107.	59-135	L535457-02	WG554911		
1,2-Dichloropropane	mg/l	0.235	0	.025	94.1	68-126	L535457-02	WG554911		
1,3,5-Trimethylbenzene	mg/l	0.452	0.370	.025	33.0*	67-136	L535457-02	WG554911		
1,3-Dichlorobenzene	mg/l	0.265	0	.025	106.	69-131	L535457-02	WG554911		
1,3-Dichloropropane	mg/l	0.251	0	.025	100.	70-122	L535457-02	WG554911		
1,4-Dichlorobenzene	mg/l	0.236	0	.025	94.6	70-123	L535457-02	WG554911		
2,2-Dichloropropane	mg/l	0.256	0	.025	102.	51-141	L535457-02	WG554911		
2-Butanone (MEK)	mg/l	1.16	0	.125	92.6	51-149	L535457-02	WG554911		
2-Chloroethyl vinyl ether	mg/l	1.25	0	.125	100.	10-161	L535457-02	WG554911		
2-Chlorotoluene	mg/l	0.288	0	.025	115.	65-133	L535457-02	WG554911		
4-Chlorotoluene	mg/l	0.273	0	.025	109.	67-129	L535457-02	WG554911		
4-Methyl-2-pentanone (MIBK)	mg/l	1.32	0	.125	106.	53-154	L535457-02	WG554911		
Acetone	mg/l	1.15	0	.125	92.2	34-146	L535457-02	WG554911		
Acrolein	mg/l	1.25	0	.125	99.8	10-189	L535457-02	WG554911		
Acrylonitrile	mg/l	1.17	0	.125	93.8	49-162	L535457-02	WG554911		
Benzene	mg/l	0.320	0.110	.025	84.1	51-134	L535457-02	WG554911		
Bromobenzene	mg/l	0.276	0	.025	110.	64-130	L535457-02	WG554911		
Bromo dichloromethane	mg/l	0.280	0	.025	112.	67-132	L535457-02	WG554911		
Bromoform	mg/l	0.251	0	.025	100.	59-137	L535457-02	WG554911		
Bromomethane	mg/l	0.289	0	.025	116.	23-177	L535457-02	WG554911		
Carbon tetrachloride	mg/l	0.281	0	.025	112.	49-140	L535457-02	WG554911		
Chlorobenzene	mg/l	0.264	0	.025	105.	69-126	L535457-02	WG554911		
Chlorodibromomethane	mg/l	0.307	0	.025	123.	68-130	L535457-02	WG554911		
Chloroethane	mg/l	0.261	0	.025	104.	32-177	L535457-02	WG554911		
Chloroform	mg/l	0.267	0	.025	107.	64-130	L535457-02	WG554911		
Chloromethane	mg/l	0.214	0	.025	85.7	27-155	L535457-02	WG554911		
cis-1,2-Dichloroethene	mg/l	0.244	0	.025	97.4	54-137	L535457-02	WG554911		
cis-1,3-Dichloropropene	mg/l	0.265	0	.025	106.	63-127	L535457-02	WG554911		
Di-isopropyl ether	mg/l	0.229	0	.025	91.8	58-133	L535457-02	WG554911		
Dibromomethane	mg/l	0.267	0	.025	107.	68-131	L535457-02	WG554911		
Dichlorodifluoromethane	mg/l	0.276	0	.025	110.	16-188	L535457-02	WG554911		
Ethylbenzene	mg/l	0.424	0.240	.025	73.5	64-135	L535457-02	WG554911		
Hexachloro-1,3-butadiene	mg/l	0.256	0	.025	102.	64-140	L535457-02	WG554911		
Isopropylbenzene	mg/l	0.344	0.110	.025	93.8	62-134	L535457-02	WG554911		
Methyl tert-butyl ether	mg/l	0.257	0	.025	103.	55-136	L535457-02	WG554911		
Methylene Chloride	mg/l	0.237	0	.025	94.9	52-130	L535457-02	WG554911		
n-Butylbenzene	mg/l	0.290	0.0580	.025	92.8	62-142	L535457-02	WG554911		
n-Propylbenzene	mg/l	0.312	0.110	.025	80.9	62-137	L535457-02	WG554911		

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L A B S C I E N C E S

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report
Level II

L535457

September 20, 2011

Analyte	Units	Matrix		Spike	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Naphthalene	mg/l	0.374	0.240	.025	53.7*	65-140	L535457-02	WG554911
p-Isopropyltoluene	mg/l	0.363	0.100	.025	105.	64-142	L535457-02	WG554911
sec-Butylbenzene	mg/l	0.302	0.0760	.025	90.5	67-139	L535457-02	WG554911
Styrene	mg/l	0.260	0	.025	104.	58-152	L535457-02	WG554911
tert-Butylbenzene	mg/l	0.309	0.0170	.025	117.	66-139	L535457-02	WG554911
Tetrachloroethene	mg/l	0.264	0	.025	105.	56-139	L535457-02	WG554911
Toluene	mg/l	0.436	0.250	.025	74.4	61-126	L535457-02	WG554911
trans-1,2-Dichloroethene	mg/l	0.248	0	.025	99.3	45-137	L535457-02	WG554911
trans-1,3-Dichloropropene	mg/l	0.264	0	.025	106.	59-130	L535457-02	WG554911
Trichloroethene	mg/l	0.262	0	.025	105.	40-155	L535457-02	WG554911
Trichlorofluoromethane	mg/l	0.291	0	.025	116.	35-177	L535457-02	WG554911
Vinyl chloride	mg/l	0.238	0	.025	95.2	32-159	L535457-02	WG554911
Xylenes, Total	mg/l	1.59	1.20	.075	52.6*	64-133	L535457-02	WG554911
4-Bromofluorobenzene					114.9	82-120		WG554911
Dibromofluoromethane					103.9	82-126		WG554911
Toluene-d8					104.4	92-112		WG554911

Analyte	Units	Matrix		Spike	Duplicate	Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec						
1,1,1,2-Tetrachloroethane	mg/l	0.0234	0.0243	93.5		71-130	3.71	20	L535449-14	WG554557
1,1,1-Trichloroethane	mg/l	0.0237	0.0236	94.9		58-137	0.340	20	L535449-14	WG554557
1,1,2,2-Tetrachloroethane	mg/l	0.0261	0.0269	104.		64-149	3.12	20	L535449-14	WG554557
1,1,2-Trichloroethane	mg/l	0.0242	0.0254	96.0		73-128	4.66	20	L535449-14	WG554557
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0178	0.0193	71.4		36-159	7.80	21	L535449-14	WG554557
1,1-Dichloroethane	mg/l	0.0236	0.0246	94.6		58-133	3.84	20	L535449-14	WG554557
1,1-Dichloroethene	mg/l	0.0178	0.0193	71.1		32-152	7.94	20	L535449-14	WG554557
1,1-Dichloropropene	mg/l	0.0228	0.0236	91.1		50-140	3.42	20	L535449-14	WG554557
1,2,3-Trichlorobenzene	mg/l	0.0262	0.0268	105.		68-135	2.28	20	L535449-14	WG554557
1,2,3-Trichloropropane	mg/l	0.0268	0.0272	107.		74-137	1.71	20	L535449-14	WG554557
1,2,3-Trimethylbenzene	mg/l	0.0249	0.0256	99.4		67-133	2.95	20	L535449-14	WG554557
1,2,4-Trichlorobenzene	mg/l	0.0265	0.0281	106.		67-133	5.63	20	L535449-14	WG554557
1,2,4,4-Trimethylbenzene	mg/l	0.0242	0.0255	96.7		62-141	5.40	20	L535449-14	WG554557
1,2-Dibromo-3-Chloropropane	mg/l	0.0225	0.0230	90.2		55-148	1.96	22	L535449-14	WG554557
1,2-Dibromoethane	mg/l	0.0245	0.0250	98.1		71-129	1.87	20	L535449-14	WG554557
1,2-Dichlorobenzene	mg/l	0.0257	0.0268	103.		75-125	4.09	20	L535449-14	WG554557
1,2-Dichloroethane	mg/l	0.0251	0.0258	100.		59-135	3.04	20	L535449-14	WG554557
1,2-Dichloropropane	mg/l	0.0239	0.0241	95.5		68-126	0.710	20	L535449-14	WG554557
1,3,5-Trimethylbenzene	mg/l	0.0240	0.0247	96.0		67-136	2.77	20	L535449-14	WG554557
1,3-Dichlorobenzene	mg/l	0.0237	0.0254	94.9		69-131	6.68	20	L535449-14	WG554557
1,3-Dichloropropane	mg/l	0.0244	0.0248	97.7		70-122	1.60	20	L535449-14	WG554557
1,4-Dichlorobenzene	mg/l	0.0253	0.0260	101.		70-123	2.61	20	L535449-14	WG554557
2,2-Dichloropropane	mg/l	0.0222	0.0212	88.8		51-141	4.36	20	L535449-14	WG554557
2-Butanone (MEK)	mg/l	0.122	0.122	97.6		51-149	0.160	22	L535449-14	WG554557
2-Chloroethyl vinyl ether	mg/l	0.000689	0.00603	0.551*		10-161	159.*	40	L535449-14	WG554557
2-Chlorotoluene	mg/l	0.0238	0.0248	95.3		65-133	3.81	20	L535449-14	WG554557
4-Chlorotoluene	mg/l	0.0241	0.0257	96.3		67-129	6.52	20	L535449-14	WG554557
4-Methyl-2-pentanone (MIBK)	mg/l	0.130	0.124	104.		53-154	4.95	21	L535449-14	WG554557
Acetone	mg/l	0.108	0.0903	86.2		34-146	17.6	22	L535449-14	WG554557
Acrolein	mg/l	0.126	0.0901	101.		10-189	33.2*	30	L535449-14	WG554557
Acrylonitrile	mg/l	0.135	0.141	108.		49-162	4.34	20	L535449-14	WG554557
Benzene	mg/l	0.0229	0.0236	91.4		51-134	3.24	20	L535449-14	WG554557
Bromobenzene	mg/l	0.0243	0.0255	97.0		64-130	4.99	20	L535449-14	WG554557
Bromodichloromethane	mg/l	0.0232	0.0240	93.0		67-132	3.35	20	L535449-14	WG554557
Bromoform	mg/l	0.0226	0.0230	90.4		59-137	1.91	20	L535449-14	WG554557
Bromomethane	mg/l	0.0300	0.0300	120.		23-177	0.0300	21	L535449-14	WG554557
Carbon tetrachloride	mg/l	0.0203	0.0207	81.1		49-140	2.01	20	L535449-14	WG554557
Chlorobenzene	mg/l	0.0235	0.0246	93.9		69-126	4.72	20	L535449-14	WG554557
Chlorodibromomethane	mg/l	0.0237	0.0246	94.7		68-130	3.89	20	L535449-14	WG554557

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Level II

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September 20, 2011

Analyte	Units	Matrix	Spike	Duplicate								
		MSD	Ref	%Rec	Limit	RPD	Limit	Ref	Samp			Batch
Chloroethane	mg/l	0.0305	0.0326	122.	32-177	6.58	21	L535449-14				WG554557
Chloroform	mg/l	0.0249	0.0260	99.6	64-130	4.19	20	L535449-14				WG554557
Chloromethane	mg/l	0.0210	0.0221	83.9	27-155	5.12	20	L535449-14				WG554557
cis-1,2-Dichloroethene	mg/l	0.0237	0.0247	94.9	54-137	4.13	20	L535449-14				WG554557
cis-1,3-Dichloropropene	mg/l	0.0243	0.0246	97.0	63-127	1.18	20	L535449-14				WG554557
Di-isopropyl ether	mg/l	0.0242	0.0250	96.9	58-133	3.08	20	L535449-14				WG554557
Dibromomethane	mg/l	0.0235	0.0242	93.8	68-131	2.95	20	L535449-14				WG554557
Dichlorodifluoromethane	mg/l	0.0196	0.0211	78.3	16-188	7.67	22	L535449-14				WG554557
Ethylbenzene	mg/l	0.0231	0.0238	92.6	64-135	2.98	20	L535449-14				WG554557
Hexachloro-1,3-butadiene	mg/l	0.0265	0.0274	106.	64-140	3.39	20	L535449-14				WG554557
Isopropylbenzene	mg/l	0.0237	0.0245	94.9	62-134	3.36	20	L535449-14				WG554557
Methyl tert-butyl ether	mg/l	0.0245	0.0250	97.9	55-136	2.22	20	L535449-14				WG554557
Methylene Chloride	mg/l	0.0232	0.0167	93.0	52-130	32.6*	20	L535449-14				WG554557
n-Butylbenzene	mg/l	0.0265	0.0271	106.	62-142	2.19	20	L535449-14				WG554557
n-Propylbenzene	mg/l	0.0244	0.0254	97.5	62-137	4.15	20	L535449-14				WG554557
Naphthalene	mg/l	0.0265	0.0270	106.	65-140	1.88	20	L535449-14				WG554557
p-Isopropyltoluene	mg/l	0.0240	0.0252	95.9	64-142	4.82	20	L535449-14				WG554557
sec-Butylbenzene	mg/l	0.0237	0.0245	94.7	67-139	3.39	20	L535449-14				WG554557
Styrene	mg/l	0.0249	0.0256	99.5	58-152	2.82	20	L535449-14				WG554557
tert-Butylbenzene	mg/l	0.0232	0.0244	92.7	66-139	5.22	20	L535449-14				WG554557
Tetrachloroethene	mg/l	0.0227	0.0237	90.8	56-139	4.43	20	L535449-14				WG554557
Toluene	mg/l	0.0228	0.0227	91.0	61-126	0.480	20	L535449-14				WG554557
trans-1,2-Dichloroethene	mg/l	0.0210	0.0220	83.9	45-137	4.80	20	L535449-14				WG554557
trans-1,3-Dichloropropene	mg/l	0.0250	0.0246	99.0	59-130	1.59	20	L535449-14				WG554557
Trichloroethene	mg/l	0.0224	0.0229	89.7	40-155	1.88	20	L535449-14				WG554557
Trichlorofluoromethane	mg/l	0.0304	0.0311	122.	35-177	2.28	23	L535449-14				WG554557
Vinyl chloride	mg/l	0.0227	0.0245	90.7	32-159	7.64	21	L535449-14				WG554557
Xylenes, Total	mg/l	0.0698	0.0719	93.1	64-133	2.98	20	L535449-14				WG554557
4-Bromofluorobenzene				96.40	82-120							WG554557
Dibromofluoromethane				107.9	82-126							WG554557
Toluene-d8				105.5	92-112							WG554557
TPH (GC/FID) Low Fraction	mg/l	5.64	5.67	103.	55-109	0.460	20	L535576-03				WG554885
a,a,a-Trifluorotoluene(FID)				102.6	62-128							WG554885
1,1,1,2-Tetrachloroethane	mg/l	0.266	0.282	106.	71-130	5.85	20	L535457-02				WG554911
1,1,1-Trichloroethane	mg/l	0.264	0.277	105.	58-137	4.99	20	L535457-02				WG554911
1,1,2,2-Tetrachloroethane	mg/l	0.259	0.282	104.	64-149	8.48	20	L535457-02				WG554911
1,1,2-Trichloroethane	mg/l	0.260	0.277	104.	73-128	6.48	20	L535457-02				WG554911
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.241	0.227	96.5	36-159	6.04	21	L535457-02				WG554911
1,1-Dichloroethane	mg/l	0.231	0.241	92.4	58-133	4.10	20	L535457-02				WG554911
1,1-Dichloroethene	mg/l	0.232	0.195	92.7	32-152	17.4	20	L535457-02				WG554911
1,1-Dichloropropene	mg/l	0.249	0.260	99.4	50-140	4.64	20	L535457-02				WG554911
1,2,3-Trichlorobenzene	mg/l	0.235	0.244	93.8	68-135	4.02	20	L535457-02				WG554911
1,2,3-Trichloropropane	mg/l	0.0138	0.283	5.52*	74-137	181.*	20	L535457-02				WG554911
1,2,3-Trimethylbenzene	mg/l	0.385	0.387	49.8*	67-133	0.720	20	L535457-02				WG554911
1,2,4-Trichlorobenzene	mg/l	0.241	0.254	96.2	67-133	5.59	20	L535457-02				WG554911
1,2,4-Trimethylbenzene	mg/l	0.615	0.621	0*	62-141	0.940	20	L535457-02				WG554911
1,2-Dibromo-3-Chloropropane	mg/l	0.240	0.245	95.8	55-148	2.42	22	L535457-02				WG554911
1,2-Dibromoethane	mg/l	0.265	0.270	106.	71-129	1.68	20	L535457-02				WG554911
1,2-Dichlorobenzene	mg/l	0.242	0.248	96.8	75-125	2.26	20	L535457-02				WG554911
1,2-Dichloroethane	mg/l	0.254	0.267	102.	59-135	5.26	20	L535457-02				WG554911
1,2-Dichloropropane	mg/l	0.228	0.235	91.2	68-126	3.08	20	L535457-02				WG554911
1,3,5-Trimethylbenzene	mg/l	0.444	0.452	29.5*	67-136	1.94	20	L535457-02				WG554911
1,3-Dichlorobenzene	mg/l	0.255	0.265	102.	69-131	3.82	20	L535457-02				WG554911
1,3-Dichloropropane	mg/l	0.244	0.251	97.7	70-122	2.79	20	L535457-02				WG554911
1,4-Dichlorobenzene	mg/l	0.233	0.236	93.2	70-123	1.43	20	L535457-02				WG554911

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



L A B S C I E N C E S

YOUR LAB OF CHOICE

AECOM Inc. - Fort Collins, CO
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 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report
Level II

L535457

September 20, 2011

Analyte	Units	Matrix	Spike	Duplicate									
		MSD	Ref	%Rec	Limit	RPD	Limit	Ref	Samp				Batch
2,2-Dichloropropane	mg/l	0.252	0.256	101.	51-141	1.41	20	L535457-02					WG554911
2-Butanone (MEK)	mg/l	1.15	1.16	91.8	51-149	0.780	22	L535457-02					WG554911
2-Chloroethyl vinyl ether	mg/l	1.25	1.25	99.8	10-161	0.480	40	L535457-02					WG554911
2-Chlorotoluene	mg/l	0.275	0.288	110.	65-133	4.41	20	L535457-02					WG554911
4-Chlorotoluene	mg/l	0.261	0.273	104.	67-129	4.70	20	L535457-02					WG554911
4-Methyl-2-pentanone (MIBK)	mg/l	1.27	1.32	102.	53-154	4.03	21	L535457-02					WG554911
Acetone	mg/l	1.12	1.15	89.9	34-146	2.52	22	L535457-02					WG554911
Acrolein	mg/l	1.20	1.25	95.9	10-189	3.92	30	L535457-02					WG554911
Acrylonitrile	mg/l	1.15	1.17	91.9	49-162	2.04	20	L535457-02					WG554911
Benzene	mg/l	0.319	0.320	83.5	51-134	0.470	20	L535457-02					WG554911
Bromobenzene	mg/l	0.265	0.276	106.	64-130	3.78	20	L535457-02					WG554911
Bromodichloromethane	mg/l	0.267	0.280	107.	67-132	5.07	20	L535457-02					WG554911
Bromoform	mg/l	0.247	0.251	99.0	59-137	1.52	20	L535457-02					WG554911
Bromomethane	mg/l	0.274	0.289	110.	23-177	5.14	21	L535457-02					WG554911
Carbon tetrachloride	mg/l	0.258	0.281	103.	49-140	8.32	20	L535457-02					WG554911
Chlorobenzene	mg/l	0.258	0.264	103.	69-126	2.19	20	L535457-02					WG554911
Chlorodibromomethane	mg/l	0.296	0.307	118.	68-130	3.88	20	L535457-02					WG554911
Chloroethane	mg/l	0.257	0.261	103.	32-177	1.60	21	L535457-02					WG554911
Chloroform	mg/l	0.255	0.267	102.	64-130	4.60	20	L535457-02					WG554911
Chloromethane	mg/l	0.201	0.214	80.2	27-155	6.56	20	L535457-02					WG554911
cis-1,2-Dichloroethene	mg/l	0.239	0.244	95.7	54-137	1.84	20	L535457-02					WG554911
cis-1,3-Dichloropropene	mg/l	0.261	0.265	104.	63-127	1.37	20	L535457-02					WG554911
Di-isopropyl ether	mg/l	0.223	0.229	89.2	58-133	2.82	20	L535457-02					WG554911
Dibromomethane	mg/l	0.257	0.267	103.	60-131	3.95	20	L535457-02					WG554911
Dichlorodifluoromethane	mg/l	0.251	0.276	100.	16-188	9.26	22	L535457-02					WG554911
Ethylbenzene	mg/l	0.424	0.424	73.8	64-135	0.190	20	L535457-02					WG554911
Hexachloro-1,3-butadiene	mg/l	0.241	0.256	96.3	64-140	6.14	20	L535457-02					WG554911
Isopropylbenzene	mg/l	0.332	0.344	88.9	62-134	3.60	20	L535457-02					WG554911
Methyl tert-butyl ether	mg/l	0.256	0.257	102.	55-136	0.260	20	L535457-02					WG554911
Methylene Chloride	mg/l	0.234	0.237	93.8	52-130	1.23	20	L535457-02					WG554911
n-Butylbenzene	mg/l	0.274	0.290	86.4	62-142	5.72	20	L535457-02					WG554911
n-Propylbenzene	mg/l	0.301	0.312	76.5	62-137	3.57	20	L535457-02					WG554911
Naphthalene	mg/l	0.377	0.374	54.8*	65-140	0.750	20	L535457-02					WG554911
p-Isopropyltoluene	mg/l	0.342	0.363	96.8	64-142	5.97	20	L535457-02					WG554911
sec-Butylbenzene	mg/l	0.287	0.302	84.2	67-139	5.32	20	L535457-02					WG554911
Styrene	mg/l	0.255	0.260	102.	58-152	2.07	20	L535457-02					WG554911
tert-Butylbenzene	mg/l	0.294	0.309	111.	66-139	4.79	20	L535457-02					WG554911
Tetrachloroethene	mg/l	0.254	0.264	102.	56-139	3.62	20	L535457-02					WG554911
Toluene	mg/l	0.445	0.436	77.9	61-126	1.96	20	L535457-02					WG554911
trans-1,2-Dichloroethene	mg/l	0.242	0.248	96.9	45-137	2.53	20	L535457-02					WG554911
trans-1,3-Dichloropropene	mg/l	0.259	0.264	104.	59-130	1.71	20	L535457-02					WG554911
Trichloroethene	mg/l	0.253	0.262	101.	40-155	3.73	20	L535457-02					WG554911
Trichlorofluoromethane	mg/l	0.264	0.291	106.	35-177	9.65	23	L535457-02					WG554911
Vinyl chloride	mg/l	0.226	0.238	90.4	32-159	5.12	21	L535457-02					WG554911
Xylenes, Total	mg/l	1.61	1.59	54.2*	64-133	0.710	20	L535457-02					WG554911
4-Bromofluorobenzene	mg/l			112.5	82-120								WG554911
Dibromofluoromethane	mg/l			103.1	82-126								WG554911
Toluene-d8	mg/l			104.4	92-112								WG554911

Batch number /Run number / Sample number cross reference

WG554557: R1856012: L535457-01 03 04
 WG554885: R1856492: L535457-01 02 03 04
 WG554911: R1856715: L535457-02
 WG554605: R1858592: L535457-01 02 03 04
 WG555187: R1860474: L535457-01 02 03 04

** Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



L A B S C I E N C E S

YOUR LAB OF CHOICE

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Quality Assurance Report
Level II

L535457

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Est. 1970

September 20, 2011

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

AECOM, Inc.
1601 Prospect Pkwy.
Fort Collins, CO 80525

Alternate billing information:

Analysis/Container/Preservative

Chain of Custody
Page _____ of _____

Prepared by:

ENVIRONMENTAL SCIENCE CORP.

12065 Lebanon Road
Mt. Juliet, TN 37122

Phone (615) 758-5858
Phone (800) 767-5859
FAX (615) 758-5859

E149

CoCode ENSRFCCO (lab use only)

Template/Prelogin

Shipped Via:

Remarks/Contaminant | Sample # (lab only)

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

8734 3433 0291

pH

Temp

Remarks:

Flow

Other

Relinquished by: (Signature) <i>Tony J. Schild</i>	Date: 09-09-11	Time: 1700	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier _____	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 31°	Bottles Received: 34TB
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>John Schild</i>	Date: 9-10-11	Time: 1130 pH Checked: NCF: ✓



NON-CONFORMANCE FORM

Login No.: 1535457

Date: 9-10-11

Evaluated by: Jasen

Client: ENSRFco

Non-Conformance (check applicable items)

- | | |
|---|---|
| <input type="checkbox"/> Parameter(s) past holding time | <input checked="" type="checkbox"/> Login Clarification Needed |
| <input type="checkbox"/> Improper temperature | <input type="checkbox"/> Chain of custody is incomplete |
| <input type="checkbox"/> Improper container type | <input type="checkbox"/> Chain of Custody is missing (see below) |
| <input type="checkbox"/> Improper preservation | <input type="checkbox"/> Broken container(s) (See below) |
| <input type="checkbox"/> Container lid not intact | <input type="checkbox"/> Broken container: sufficient sample
volume remains for analysis requested (See below) |

If no COC: Received by _____
Date: _____ Time: _____
Temp: _____ Cont. Rec. _____ pH: _____
 FedEx UPS SWA Other _____
Tracking # _____

- Insufficient packing material around container
- Insufficient packing material inside cooler
- Improper handling by carrier (FedEx / UPS / Courier)
- Sample was frozen

Comments: (what TPH?)

Login Instructions:

TSR Initials: LH

Client informed by call / email / fax / voice mail date: 9/12/11 time: 11:00
Client contact: Peri, Client

Client contact: per quote

CROWY + DROWSY